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FINAL
SOUTHEAST ROCKFORD OPERABLE UNIT
REMEDIAL INVESTIGATION
TECHNICAL MEMORANDUM

PREPARED FOR:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
REMEDIAL PROJECT MANAGEMENT SECTION
FEDERAL SITE MANAGEMENT UNIT
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SPRINGFIELD, ILLINOIS 62794-9276

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TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

LIST OF TABLES

LIST OF TABLES (Continued)

LIST OF FIGURES

LIST OF FIGURES (Continued)

1.0 INTRODUCTION

Groundwater sampling programs by the Illinois Department of Public Health (IDPH), the United States Environmental Protection Agency (USEPA), and the Illinois Environmental Protection Agency (IEPA) have established that a major groundwater contamination problem exists in the southeast section of Rockford, Illinois. Previous studies have shown that a plume of Volatile Organic Compound (VOC) contaminated groundwater traverses an area where local residents rely on well water for a potable water source. In response to this threat to public health, IEPA and USEPA are currently involved in a joint effort to remedy the problem by identifying affected residents and providing them with an alternative water source. USEPA is currently constructing new water lines and connecting affected residents to existing water lines to provide city water to all residents in the core of the VOC plume.

IEPA is currently conducting a two-part investigation of the area, consisting of an Operable Unit remedial investigation to address immediate threats to public health on the margins of the plume, and a more comprehensive remedial investigation/feasibility study (RI/FS) to address long-term remediation of the contamination problem. During June 1990, Camp Dresser & McKee (CDM), under the direction of IEPA, conducted a groundwater sampling investigation of the area in order to identify affected residents on the margins of the plume, as part of the Operable Unit remedial investigation. In this Technical Memorandum, the results of this Operable Unit remedial investigation are presented and synthesized with existing data to summarize the current status of groundwater contamination in the Southeast Rockford area.

1.1 PURPOSE OF MEMORANDUM

The purpose of this Technical Memorandum is to document and present the results of the IEPA Operable Unit remedial investigation that took place in June 1990. The report is organized in four sections. In the first section, general information about the site, such as site geology,

physiography, and history is summarized. In the second section, the field techniques employed during the investigation are discussed. In the third section, the results of the groundwater sampling are presented. In the fourth section, the risks to public health are discussed. Following these sections, the conclusions of the study are summarized. This document is intended to provide the technical background to support the Feasibility Study (FS) and Record of Decision (ROD). Other aspects of the groundwater contamination problem in southeast Rockford, such as identifying source areas, predicting contaminant migration pathways, and assessing the impact on the environment, will be addressed in the full-scale RI/FS, which is currently in the planning stage.

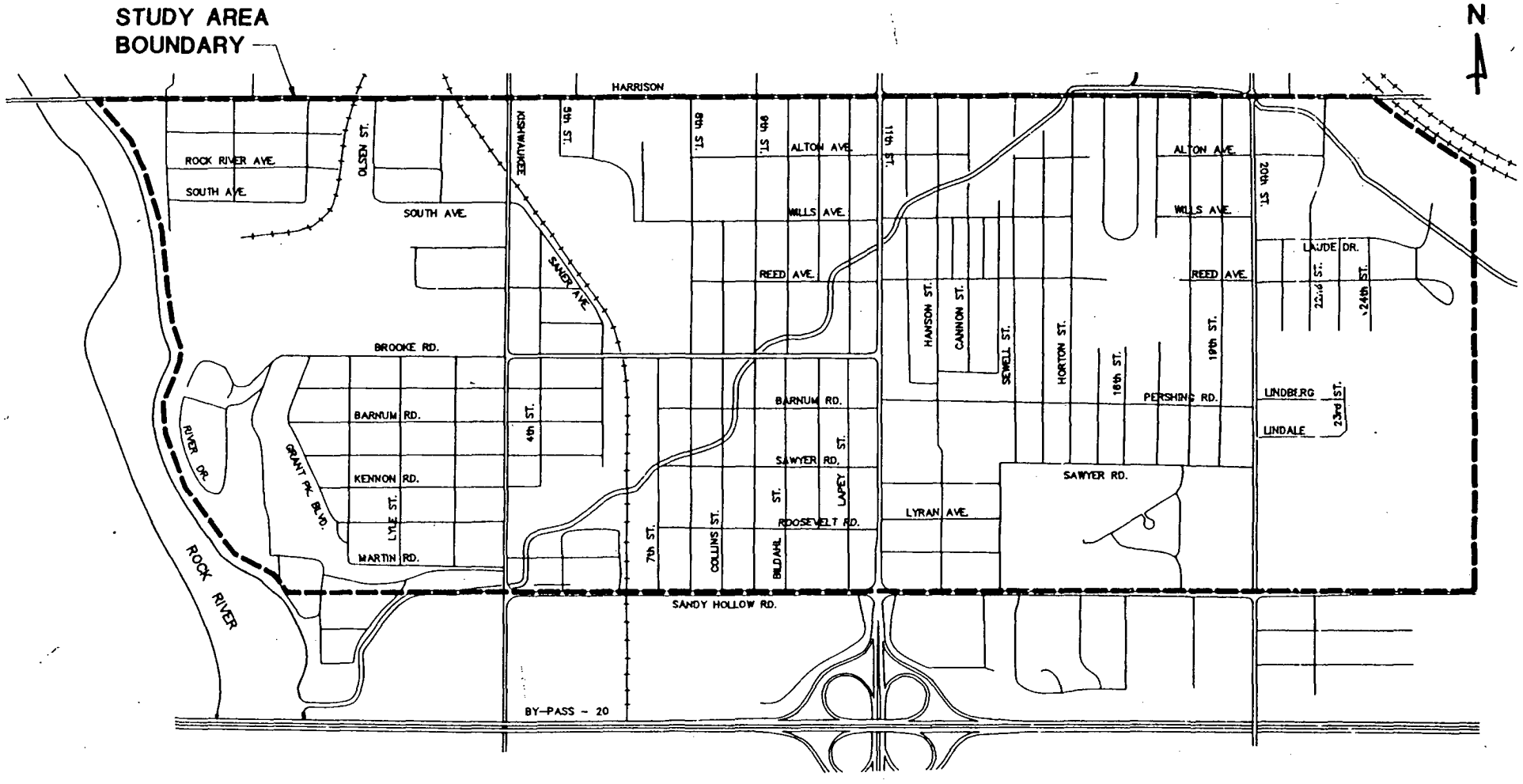
1.2 STUDY AREA BACKGROUND

During the course of planning and conducting the Southeast Rockford Operable Unit, previous studies, available literature, and other pertinent information were reviewed. In the following sections, a summary of this review is presented.

1.2.1 STUDY AREA LOCATION

The study area is located near Southeast Rockford in Winnebago County, and consists of approximately 2.4 square miles in Sections 1, 2, and 3, T43N, R1E and Section 6, T43N, R2E. The study area is bounded by Harrison Avenue to the North, Sandy Hollow Road to the South, the north-south center line of Section 6 to the East, and the Rock River to the West. The study area is shown in Figure 1-1.

The study area has been expanded from the boundaries used to score the site for inclusion on the National Priorities List. The site was originally bounded by 8th Street to the West, Sawyer Road to the South, 21st Street to the East and Harrison Avenue to North.



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SCALE:
0 0.5 MILES

SOUTHEAST ROCKFORD STUDY AREA

FIGURE NO.
1-1

1.2.2 STUDY AREA DESCRIPTION

The study area is predominantly an urban residential area, which includes scattered industrial, retail and commercial operations. A small industrial park is located near the eastern edge of the study area in the vicinity of Laude Drive. Other industrial areas are situated in the vicinity of Harrison Street and Eighth Street, near the Rock River in the northwest part of the study area, and elsewhere in the study area.

The study area is predominantly flat-lying and slopes gently westward towards the Rock River, but locally contains low-relief hilly areas. Maximum topographic relief across the study area is approximately 120 feet. A small concrete-lined drainage ditch runs across the study area and discharges to the Rock River in the southwest corner. A review of 117 IDPH Well Construction Reports establishes that the majority of the residential wells in the study area are screened in the 40-foot to 70-foot range in a sand and gravel aquifer. Although deeper residential wells are common in the study area, no systematic distribution of the deeper wells is evident.

1.2.3 GEOLOGIC SETTING

The local geology of the study area consists of a valley-train deposit that fills an eroded pre-glacial drainageway. The valley-train deposit forms a wedge of unconsolidated sand and gravel deposits that are interbedded with laterally discontinuous clay- and silt-rich strata. These unconsolidated sediments unconformably overlie eroded bedrock of Ordovician age. Depending on location, the sediments overlie the Galena-Platteville Group or the St. Peter Sandstone, the latter of which is an important aquifer in northern Illinois.

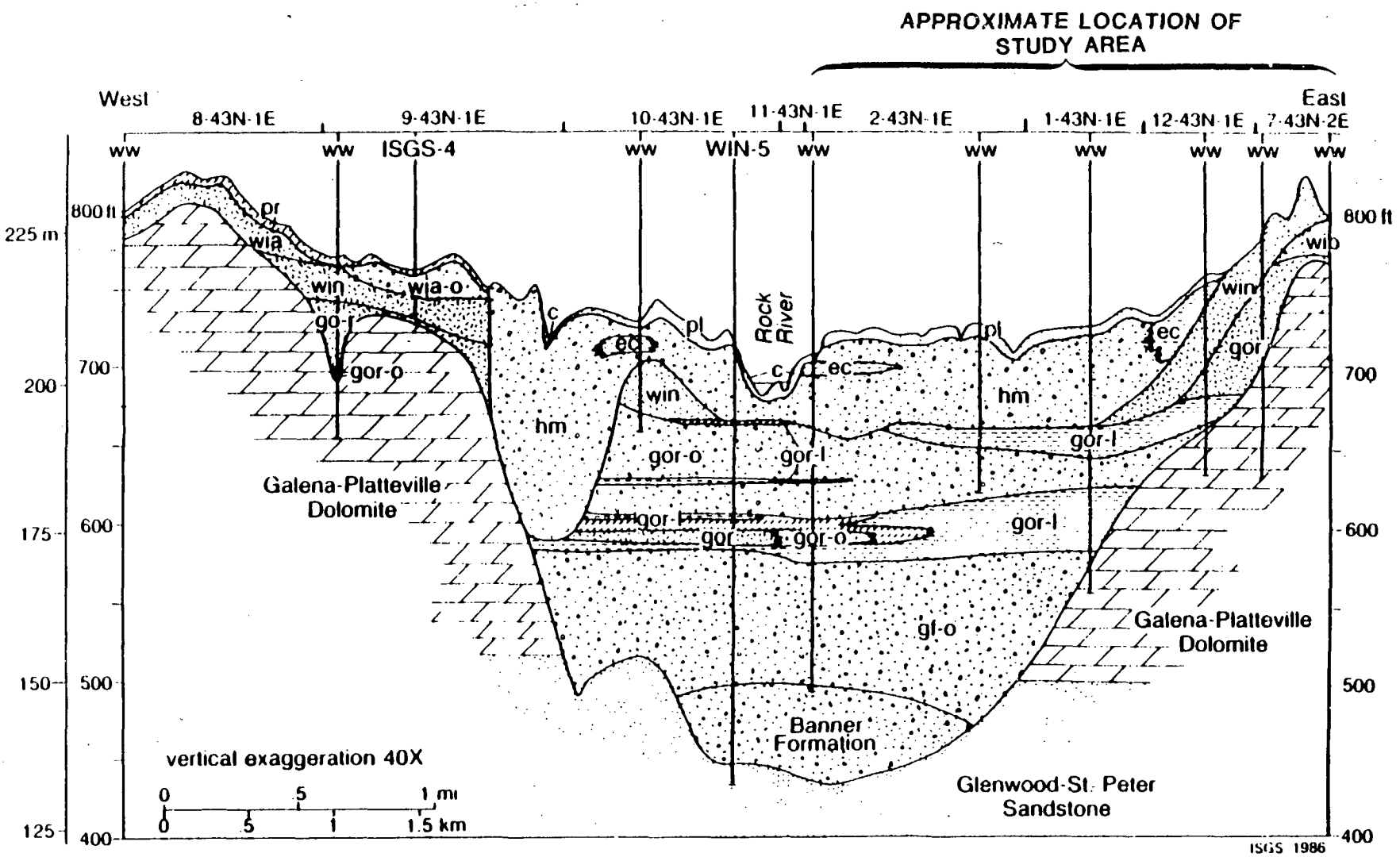
Within the study area, the unconsolidated sediments increase in thickness to the West towards the Rock River. Based on well logs from Municipal Well 35 (located at 2944 Bildahl) and IEPA monitoring wells from Barrett's Mobile Home Park (in the vicinity of Harrison and Marshall), the uncon-

solidated sediments are expected to range in thickness from approximately 50 to 250 feet in the study area. The unconsolidated sedimentary wedge is schematically illustrated in the cross section in Figure 1-2. This cross section is from a report by Wehrmann et al. (1988) on the groundwater quality in the Rockford area, and is based on well logs from locations near the study area.

The Galena-Platteville is a carbonate sequence composed predominantly of fractured and jointed dolomite in the study area. In northern Illinois, the combined thickness of the Galena and Platteville Groups can range as high as approximately 400 feet (Willman et al. 1975), but erosional truncation of the unit can cause abrupt lateral changes in thickness. Although the Galena-Platteville is not a major aquifer in northern Illinois, the unit is water-bearing and is used for water supply wells in some areas.

The Glenwood Formation, which is the lowermost member of the Galena-Platteville, is a unit of varying lithology that separates the upper members of the Galena-Platteville from the St. Peter. In some parts of northern Illinois, the unit is shaly, and may act locally as an aquitard. The Glenwood Formation thins in the vicinity of Rockford, and may not be present in the study area. If present in the study area, fracturing of shale and dolomite members of the formation or a facies change to sandstone could reduce the likelihood that the Glenwood Formation would act as an aquitard.

The Glenwood Formation overlies the St. Peter Sandstone, which is a friable, medium-grained, pure quartz sandstone. In northern Illinois, the St. Peter can locally reach thicknesses of up to 700 feet, but thicknesses on the order of 300 feet are anticipated in the study area (Willman et al. 1975). The unit is an important aquifer in northern Illinois, and several of the City of Rockford's municipal water supply wells derive potable water from the St. Peter.



SOURCE : H. A. Wehrmann, et. al., September 1988

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EAST/WEST CROSS-SECTION OF UNCONSOLIDATED SEDIMENTARY WEDGE IN VICINITY OF STUDY AREA

FIGURE NO. 1-2

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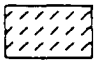
SYMBOL	UNIT	LITHOLOGY
wia	Argyle	pinkish or buff–tan; often friable sandy till
win	Nimtz	gray–brown or buff; often compact sandy or sandy loam till
wib	Beaver Creek Sand	sand and gravel outwash
ge	Esmond	grayish brown silty clay till
gor	Oregon	pinkish brown or buff sandy loam till
gf	Fairdale	yellowish brown sandy loam till
gk	Kellerville	brown clay loam to silt loam till
—|	Lacustrine	fine–grained sediments associated with a specific till
—O	Outwash	sand and gravel deposits associated with a specific till
c	Cahokia Alluvium	sand, silt, and clay deposited by modern rivers and streams
pl	Parkland Sand	windblown (eolian) sand
pr	Peoria Loess and Roxana Silt	windblown (eolian) silt
hm	Henry Formation	Mackinaw Member sand and gravel
ec	Equality Formation	Carmi Member lake silts and clays

 till

 outwash sand and gravel

 lacustrine clay

 lacustrine silt–clay

 lacustrine sandy silt–sandy clay

 organic materials or buried soil

TD – total depth

WW – water well boring

WIN # – ISGS test boring

TB – tollway boring

NOTE

The Banner Formation is a lower Quaternary glacial formation consisting primarily of till and intercalated sands, silts, and gravels, which are of Yarmouthian age. (Wilman, 1975)

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LEGEND FOR GEOLOGIC CROSS SECTION

FIGURE NO. 1-2 Cont'd

The St. Peter Sandstone unconformably overlies the Prairie du Chien, Eminence-Potosi, and Franconia Formations, which are dominantly composed of sandy and argillaceous dolomites. Together these units act as a confining unit which is termed the 'middle confining unit' in Illinois State Geological Survey (ISGS) Co-op Groundwater Report 10. In the vicinity of the study area, the middle confining unit is expected to be approximately 100 feet thick (ISGS, 1985).

The geologic section from the base of the St. Peter to the surface may contain no aquitards in the study area. It is possible, therefore, that hydraulic communication could form a pathway for contaminant migration from the unconsolidated sediments to the Galena-Platteville and St. Peter Sandstone.

1.2.4 STUDY AREA HISTORY AND PRIOR INVESTIGATIONS

Groundwater contamination by volatile organic compounds (VOCs) was initially discovered in the study area by the City of Rockford in 1981. Four municipal wells in Southeast Rockford were taken out of service in December 1981 as a result of the contamination. In 1982, the city discovered that additional wells were contaminated and subsequently closed down more city wells. Contamination of Municipal Well 35, located near Ken Rock Playground (Bildahl Street and Reed Avenue), was discovered during a routine sampling of the well in 1984; the well was tested for 33 priority pollutants and several VOCs were detected.

Because contaminants were present at levels above the Safe Drinking Water Act Maximum Contaminant Level (MCL), the well was taken out of service in 1985. Subsequent analysis of a sample from this municipal well after disinfection with chlorine in 1989 indicated that none of the original contaminants were present above the level of detection; however, the analysis did show the presence of several trihalomethanes at low levels. These compounds are commonly associated with water disinfection and are not attributable to the groundwater contamination problem in the area. Tri-

halomethanes are regulated under the Safe Drinking Water Act, but do not warrant concern for this study because they were detected at levels significantly lower than the MCL.

IEPA discovered that VOCs were present in Southeast Rockford's water in 1984 as a result of a report that plating wastes were being illegally disposed of in a well located at 2613 South 11th Street. In October 1984, IDPH initiated an investigation that involved sampling 49 wells in the vicinity of the well. While the investigation did not find significant levels of contaminants common to plating wastes, it did report high levels of chlorinated solvents. These same contaminants were detected in the City of Rockford's municipal well.

IDPH conducted four separate sampling investigations involving residential wells in the Southeast Rockford area: 49 samples were collected in 1984, 43 samples in 1985, 17 in 1988, and 267 in 1989. For the most part, sample locations varied during the separate sampling investigations; however, in some cases, wells were sampled more than once.

In 1986, the Illinois State Water Survey (ISWS) completed a project that involved a regional characterization of groundwater quality in Rockford. The study indicated that groundwater samples from public and private wells in the Southeast Rockford area contained significant concentrations of VOCs. Seven private well sites sampled in the Southeast Rockford area as part of the study contained greater than 10 ug/l total VOCs; and 5 of those 7 contained greater than 100 ug/l total VOCs. One of the private wells containing greater than 100 ug/l total VOCs was located near the Rock River (Wehrmann, 1988).

In August and October 1989, the USEPA Technical Assistance Team (TAT) sampled 112 residential wells in the Southeast Rockford area and tested for the following abbreviated list of VOCs:

- o Trichloroethylene,
- o Cis-1,2-Dichloroethylene,
- o 1,2-Dichloroethane,
- o 1,1,1-Trichloroethane,
- o Trans-1,2-Dichloroethylene, and
- o 1,1-Dichloroethane.

Fourteen of the 112 samples were analyzed using gas chromatograph/mass spectroscopy (GC/MS) for the above compounds and for 24 additional VOCs. The contaminants detected in the USEPA/TAT study correlate with the full volatile scan IDPH data, indicating that the VOC contaminants of concern in the study area consist of the chlorinated solvents listed above, as well as 1,1-Dichloroethene and Tetrachloroethene.

Metals have been analyzed in only a limited number of samples in the Southeast Rockford Operable Unit study area. Chromium was detected by IEPA in a 1984 investigation of illegal disposal of plating wastes in a well located at 2613 South 11th Street. Detailed information from this investigation is not available. Cadmium and lead were detected at levels in excess of the MCL in groundwater at Barrett's Mobile Home Park (located at Harrison and Marshall) in 1988 during a routine IEPA investigation of community water supply wells. In the same study, arsenic was detected in one well at a concentration of 25% of the MCL for arsenic.

As a result of the sampling events by state and federal agencies, the Southeast Rockford site was proposed for inclusion on the NPL in June 1988 and was added to the National Priorities List (NPL) in March 1989 as a state-lead, federally funded Superfund site. A removal action by USEPA, which is currently in progress, includes extending water mains and providing hookups to city water for residences with private wells contaminated with VOCs at levels greater than 25 percent of the Removal Action Limit (RAL). USEPA began construction of the water main extensions and residential hookups in June 1990.

2.0 STUDY AREA INVESTIGATION

The study area investigation for the Operable Unit did not involve geological investigations, human population surveys, or ecological investigations. Therefore, this memorandum addresses only those activities associated with the groundwater investigation.

2.1 OVERVIEW OF WELL SAMPLING

During the ten-day period spanning June 11 to June 20, 1990, a total of 117 residential, non-residential, and municipal groundwater wells were sampled for a target list of volatile organic and inorganic (metals) analyses by CDM under contract with IEPA. Volatile organics analyzed for in this investigation included trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), 1,2-dichloroethane (1,2-DCA), 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), tretrachloroethene (PCE), and vinyl chloride. Metals analyzed for included arsenic, cadmium, chromium and lead.

Several criteria were used to select locations for the samples collected during the IEPA Operable Unit investigation. These factors are discussed in detail in Section 3.4 of the Operable Unit Work Plan, and are summarized below. The primary objective of the sampling effort was to identify residential wells that are contaminated at levels between the Safe Drinking Water Act Maximum Contaminant Level (MCL) and the method detection limit for any of the contaminants analyzed. Because the area contaminated at levels above the MCL for TCE (5 ppb) encompassed the areas where MCLs were exceeded for any other contaminant, the area inside the 5 ppb contour line as defined by USEPA and IDPH data was excluded from further IEPA sampling. It was assumed that groundwater contamination at levels in excess of the MCL had been verified by previous studies within the 5 ppb contour. The 5 ppb TCE contour lines for USEPA and IDPH data do not coincide because of

data incompatibilities between the two data sets. To compensate for this disparity in reported concentrations, the outermost of the IDPH and USEPA 5 ppb contours was used as the area from which further samples were excluded, as a worst-case approach.

In the area outside the 5 ppb TCE contour, the primary criteria used for selection of sample points were sample density and sample availability. Sample locations were chosen based on existence of data gaps, presence of private wells, and results of previous sampling episodes. In all areas outside the 5 ppb TCE contour, a target sample density of 1 to 2 samples per block was chosen. In some areas, field conditions (lack of private wells) precluded collecting one sample per block, as discussed below.

A total of 117 investigative samples were collected during the June 1990 sampling event. These samples included 106 residential wells, 10 non-residential wells, and 1 municipal well. Exact addresses for targeted sample locations were determined based primarily on an IEPA survey of water use by area residents, and on address maps supplied by the City of Rockford. Table 2-1 lists sampling locations that were targeted using these sources in the Operable Unit Work Plan. Because of inaccuracies and uncertainties in both the IEPA well survey and the address maps, it was not possible to sample all of the locations targeted in the Work Plan. In many cases, alternate sample locations were selected in the field, and in other cases no sample was collected due to an absence of appropriate alternates. The lack of suitable sample locations stemmed from the prevalence of city water or other factors. Locations that were actually sampled as a part of this Operable Unit investigation are listed in Table 2-2. Locations that were originally targeted for sampling but could not be sampled are presented in Table 2-3 along with the reasons that samples could not be collected.

Table 2-1
Sample Locations Targeted in Operable Unit Work Plan

Street	*Address*	*Street*	*Address*	*Street*	*Address*
4th	[redacted]	Barnum	[redacted]	Kishwaukee	[redacted]
4th		Barnum		Lapey	
4th		Barnum		Lapey	
4th		Bildahl		Lapey	
4th		Bildahl		Lapey	
5th		Bildahl		Lapey	
7th		Bildahl		Lapey	
7th		Bildahl		Lindale	
7th		Bildahl		Lindale	
7th		Bildahl		Lindberg	
8th		Bildahl		Lindberg	
8th		Brooke		Lyran	
8th		Brooke		Lyran	
8th		Brooke		Marshall	
8th		Brooke		Marshall	
8th		Brooke		Martin	
8th		Brooke		Martin	
8th		Brooke		Martin	
9th		Brooke		Mattis	
9th		Brooke		Olsen	
9th		Brooke		Pershing	
9th		Brooke		Pershing	
9th		Collins		Ranger	
9th		Collins		River Blvd.	
9th		Collins		River Blvd.	
9th		Collins		River Blvd.	
10th		Collins		Rock Riv. Ave	
10th		Collins		Roosevelt	
11th		Collins		Sandy Hollow	
11th		Fitch		Sandy Hollow	
11th		Fitch		Sandy Hollow	
11th		Fitch		Sandy Hollow	
11th		Fitch		Sandy Hollow	
11th		Grant		Saner	
11th		Grant		Saner	
11th		Hamilton		Saner	
15th		Harrison		Sawyer	
16th		Harrison		Sawyer	
16th		Harrison		Sawyer	
17th		Harrison		Sawyer	
17th		Harrison		Sewell	
17th		Johnson		Sewell	
18th		Kennon		Sewell	
19th		Kennon		South	
20th		Kennon		South	
20th		Kennon		Taft	
20th		Kishwaukee		Municipal Well 35	
Barnum		Kishwaukee			
Barnum		Kishwaukee			

Table 2-2
Summary of Locations Sampled

Street	*Address*	*C-O-C Date*	*Comments*
4th	[redacted]	11-Jun	[redacted]
4th		11-Jun	
4th		12-Jun	
4th		14-Jun	
5th		15-Jun	
7th		15-Jun	
7th		13-Jun	
7th		14-Jun	
8th		14-Jun	
8th		14-Jun	
8th		17-Jun	
8th		18-Jun	
8th		18-Jun	
8th		13-Jun	
8th		13-Jun	
8th		13-Jun	
8th		13-Jun	
8th		13-Jun	
9th		14-Jun	
9th		18-Jun	
9th		15-Jun	
9th		14-Jun	
10th		14-Jun	
16th		13-Jun	
16th		13-Jun	
17th		13-Jun	
18th		14-Jun	
20th		18-Jun	
20th		18-Jun	
Barnum		20-Jun	
Barry		18-Jun	
Bildahl		19-Jun	
Bildahl		15-Jun	
Bildahl		16-Jun	
Bildahl		15-Jun	
Bildahl		16-Jun	
Bildahl		15-Jun	
Bildahl		15-Jun	
Brooke		18-Jun	
Brooke		12-Jun	
Brooke		12-Jun	
Brooke		12-Jun	
Brooke		12-Jun	
Brooke		15-Jun	
Brooke		15-Jun	
Collins		13-Jun	
Collins		14-Jun	

• C-O-C = Chain of Custody

Table 2-2 cont.
Summary of Locations Sampled

Street	*Address*	*C-O-C Date*	*Comments*
Collins	[redacted]	16-Jun	
Collins		14-Jun	
Collins		13-Jun	
Grant		16-Jun	
Grant		18-Jun	
Hamilton		18-Jun	[redacted]
Hamilton		11-Jun	
Harrison		15-Jun	
Harrison		18-Jun	
Harrison		13-Jun	
Horton		15-Jun	Extra Sample Point to Improve Sample Density
Johnson		11-Jun	
Kennon		19-Jun	[redacted]
Kennon		19-Jun	
Kishwaukee		19-Jun	
Kishwaukee		15-Jun	[redacted]
Kishwaukee		14-Jun	Extra Sample Point to Improve Sample Density
Kishwaukee		14-Jun	
Lapey		19-Jun	
Lapey		16-Jun	[redacted]
Lapey		16-Jun	
Lapey		15-Jun	
Lapey		14-Jun	
Lapey		14-Jun	[redacted]
Lindale		13-Jun	
Lindale		12-Jun	
Lindberg		12-Jun	
Lindberg		14-Jun	
Lyran		11-Jun	
Lyran		12-Jun	
Marshall		14-Jun	
Marshall		15-Jun	
Martin		13-Jun	
Mattis		12-Jun	
New Milford		18-Jun	
Olsen		12-Jun	
Pershing		15-Jun	
Pershing		15-Jun	
Ranger		12-Jun	
River Blvd.		12-Jun	
River Blvd.		18-Jun	
River Blvd.		19-Jun	[redacted]
Rock Riv. Ave		12-Jun	
Roosevelt		18-Jun	
Sandy Hollow		16-Jun	
Sandy Hollow		18-Jun	

• C-O-C = Chain of Custody

Table 2-2 cont.
Summary of Locations Sampled

Street	*Address*	*C-O-C Date*	*Comments*
Sandy Hollow	[redacted]	18-Jun	
Sandy Hollow		13-Jun	
Sandy Hollow		13-Jun	[redacted]
Saner		12-Jun	
Saner		19-Jun	
Saner		15-Jun	
Sawyer		13-Jun	
Sewell		19-Jun	
Sewell		15-Jun	
South		12-Jun	
Taft		18-Jun	

Non-residential Wells

Street	*Address*	*C-O-C Date*	*Comments*
8th	[redacted]	18-Jun	Estwing Manufacturing — Non Potable
11th		18-Jun	Rockford Cylinder Gas — Potable
11th		11-Jun	Tussing Tile & Flooring — Potable
11th		12-Jun	Smith Auto Repair — Potable
11th		12-Jun	Goodyear Tire Co. — Potable
11th		15-Jun	McDonald's Restaurant — Potable
11th		15-Jun	Pizza Hut Restaurant — Potable
17th		13-Jun	East Rockford Collision Center — Non Potable
Bildahl		19-Jun	Municipal Well 35 — Not In Use
Brooke		19-Jun	Kincade's Service Station — Potable
Collins		16-Jun	Corcoran's Body Shop — Potable
Energy Ave.		14-Jun	Commonwealth Edison — Non Potable
Harrison		19-Jun	Rockford Products — Non Potable
Kishwaukee		18-Jun	Rock River Reclamation Dist. — Non Potable

• C-O-C = Chain of Custody

Table 2-3
Summary of Locations From Which Samples Could Not Be Collected

Street	*Address*	*Comments*
6th	[redacted]	No Such Number, No Alternate Wells Available
7th		No Wells Available
9th		No Wells Available
9th		Hook-up to Existing Water Line Planned by USEPA
9th		Hook-up to Existing Water Line Planned by USEPA
9th		Hook-up to Existing Water Line Planned by USEPA
10th		No Wells Available
11th		Skipped Because of Proximity to Other Samples
15th		No Wells Available
17th		Well Hit by Lightning — No Appropriate Alternate Available
19th		City Water, No Appropriate Alternates Available
20th		House Abandoned — Well Not Operational
Barnum		No Wells Available
Barnum		No Wells Available
Barnum		No Wells Available
Barnum		No Wells Available
Bildahl		No Wells Available
Brooke		No Wells Available
Brooke		No Wells Available
Brooke		No Wells Available
Fitch		No Wells Available
Fitch		No Wells Available
Fitch		No Wells Available
Fitch		No Wells Available
Kennon		No Wells Available
Martin		No Wells Available
Martin		No Wells Available
Saner		Skipped Because of Proximity to Other Samples
Sawyer		No Wells Available
Sawyer		No Wells Available
Sawyer		No Wells Available
Sewell		No Wells Available
South		No Wells Available

2.2 WELL SAMPLING PROTOCOL

Well sampling was conducted by teams of two persons who recorded data on Sample Collection Sheets (Appendix A) and in Field Notebooks (Appendix B). Sampling typically began with verification of information such as resident's name and address, as well as relevant details about the well and the sample point. Whenever possible, the well and its waterlines were visually inspected to confirm the absence of a water softener, to note the presence of PVC pipes and other details of well construction, and to ensure that the point of sample collection was located as close as possible to the well. Information provided by the resident was used in cases where visual inspection of the well system was not possible or was not allowed.

In order to ensure that a representative groundwater sample was collected, standing water from the well and plumbing system was purged by running the sample point faucet at full volume for a minimum of 10 to 15 minutes. After a minimum of 10 minutes, the pH, temperature, and conductivity of the purge water was measured at 1 to 2 minute intervals. The purge was considered adequate when three consecutive measurements of pH, temperature, and conductivity fell within the ranges specified on the Sample Collection Sheets (Appendix A). Purge rate was measured by noting the time required to fill a container of known volume, and both purge rate and total purge time were noted on the Sample Collection Sheets.

After adequate purging (generally 15-20 minutes), the flow rate was reduced to a trickle to minimize disturbance to the sample water, and a sample for Volatile Organic Analysis (VOA) was collected in an appropriate number of 40 ml vials. The VOA vials were carefully checked for air bubbles and were retaken if any bubbles were detected. Next, flow rate was increased and the sample for metals analysis was collected in one 1-liter polyethylene bottle. Faucet aerators and hoses were removed prior to sample collection. Surgical gloves were worn at all times during sample collection and were changed frequently at each sample location. The VOA vials were placed in a sealable plastic bag and placed with the metals samples in an ice-bearing

cooler. The samples were then taken to the CDM trailer where the samples for metals analysis were preserved with nitric acid (supplied by IEPA) and checked with pH paper to verify that solution pH was less than 2; VOA samples were not chemically preserved. In the trailer, the paperwork team completed the necessary sample handling and documentation in accordance with USEPA Region V procedures. Finally, the samples were packed following USEPA protocol and shipped by overnight carrier (Federal Express) to the appropriate laboratories for analysis: organic samples were sent to S-Cubed in San Diego, California and the inorganic samples were sent to Centec Analytical Services in Salem, Virginia.

2.3 QUALITY ASSURANCE/QUALITY CONTROL

2.3.1 FIELD PROCEDURES

The electrical conductivity meters and portable pH meters were calibrated every day prior to field measurements. The instruments were calibrated according to the manufacturer's instructions, which varied for each instrument. Commercially prepared conductivity solutions (1,000 umhos and 10,000 umhos) and pH buffer solutions (4 and 7) were used for calibration.

The accuracy of the information on the sample bottle labels was verified by the paperwork personnel in the trailer. Tag numbers attached to the sample bottles were cross-checked with tag numbers from the Chain of Custody Record prior to packaging. Sample handling and documentation were carried out in accordance with guidelines specified in the USEPA Region V Sample Handling Manual (March 1989), which is excerpted in Appendix C of the Sampling and Analysis Plan (SAP) of the Operable Unit Project Plans. All sample bottles were provided by the IEPA Sample Bottle Supply Program as discussed in Appendix D of the Quality Assurance Project Plan.

In addition to investigative samples, the following QA/QC samples were also collected as specified in the Operable Unit Project Plans: 10 field duplicates, 10 field blanks, and 8 Matrix Spike/Matrix Spike Duplicates

(MS/MSDs). In addition, a trip blank consisting of four 40-ml vials was included in each cooler containing samples for organic analysis; a total of 10 trip blanks were shipped. The trip blanks, which contained reagent-grade distilled water, were provided by IEPA. Pertinent information regarding QA/QC samples is listed in Table 2-4. Field duplicates (i.e., replicates of the investigative samples) were collected at the same time, following the same procedures as those for investigative samples. Field blanks containing reagent-grade distilled water were collected at the same time and location and in the same manner as the investigative samples. The MS/MSD sample for organic analysis consisted of four 40 ml vials, whereas the 1-liter inorganic sample was sufficient for both the investigative and MS/MSD analyses.

Samples were packaged and shipped as specified in Sections 3.4 and 3.5 of the Sampling and Analysis Plan (SAP). Samples that were collected late in the day or on Sunday were shipped by overnight carrier (Federal Express) the following day. Samples held overnight were kept on ice in coolers that were secured with custody seals. The trailer was locked at all times when unoccupied.

2.3.2 ANALYTICAL PROCEDURES

Organic samples were analyzed by S-Cubed in San Diego, California using Gas Chromatography/Mass Spectrometry. The organic samples were analyzed for the 9 VOCs listed in Table 3-9. Inorganic samples were analyzed by Centec Analytical Services of Salem, Virginia using Graphite Furnace Atomic Absorption (GFAA) for arsenic, cadmium, and lead, and Inductively Coupled Plasma (ICP) Emission for chromium. Both laboratories are part of the Contract Laboratory Program (CLP). Specific data requirements and QC procedures required of the analytical laboratories are detailed in the Special Analytical Services (SAS) requests, which can be found in Appendix B of the QAPP. The SAS request for organic analysis was based on the Safe Drinking Water Act (SDWA) analytical method 524.2 for low detection limits. The inorganic SAS was derived from the CLP Region V standardized SAS for

Table 2-4
*Summary of QA/QC Sample Locations **

Field Duplicate	
Street Address	*Date*
4th	14-Jun
10th	14-Jun
Bildahl	16-Jun
Brooke	12-Jun
Harrison	19-Jun
Harrison	13-Jun
Horton	15-Jun
Johnson	11-Jun
Lapey	19-Jun
River	18-Jun

Field Blank	
Street Address	*Date*
8th	18-Jun
11th	12-Jun
17th	13-Jun
18th	14-Jun
Grant	16-Jun
Harrison	19-Jun
Lapey	15-Jun
Lapey	14-Jun
Lyran	11-Jun
Saner	19-Jun

Matrix Spike Duplicate	
Street Address	*Date*
9th	14-Jun
11th	11-Jun
Bildahl	16-Jun
Brooke	12-Jun
Collins	13-Jun
Collins	14-Jun
Harrison	18-Jun
Kennon	19-Jun

*** 10 trip blanks were analyzed in addition to the samples listed.**

inorganic drinking water analysis. Upon receipt of the analytical results, data validation was performed by CDM in accordance with the general procedures for data assessment outlined in Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses (February 1, 1988), and in Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses (July 1, 1988). Both documents were prepared by USEPA Data Review Work Group. Factors scrutinized during data validation included sample holding times, instrument tuning and performance, instrument calibration, analyte concentrations in blanks, surrogate recoveries, matrix spike/matrix spike duplicate analysis, and other quality control parameters outlined in the respective SAS requests.

2.4 FIELD MAPPING OF ADDRESSES

Street addresses within the study area were mapped in the field to develop an accurate address database. This task was accomplished by noting street numbers from houses or mailboxes and marking this information on digitized plat maps. The resulting address map is included as Figure 3-1, in the map packet accompanying this report.

2.5 DEVIATIONS FROM WORK PLAN

During the course of field work in the Southeast Rockford Study Area, several deviations from the Operable Unit Work Plan were made in order to expedite field activities and accommodate unforeseen circumstances. In this section, these deviations are discussed and documented.

The major deviation from the Operable Unit Work Plan was the number of samples collected in the field. The Work Plan called for 155 investigative samples, consisting of 144 residential samples, 10 industrial samples and 1 municipal well sample. As field work progressed, it became clear that many of the locations originally targeted for sampling, as well as the nearby alternate sample locations, could not be sampled for a variety of reasons. The bulk of these locations are in the southwestern portion of the study

area, west of Kishwaukee Street and south of Brooke Road, where many of the possible sample locations are serviced with municipal water. Other factors that prevented sample collection are listed in Table 2-3. After conferring with David Dollins, IEPA Project Manager, on June 19, 1990, it was decided that adequate attempts had been made to locate alternates for the sample points originally targeted in the Work Plan, and that the sample coverage from available sample points was sufficient to justify termination of sampling activities. As a result, a total of 117 investigative samples was collected.

Two residential samples not included in the Work Plan were added in order to improve sample density in areas where sample points were available. These samples included 3129 Horton Street and 3239 Kishwaukee Street.

Other deviations from the Work Plan involved industrial well samples. The Work Plan originally called for sampling ten industries that use private wells for potable water. Based on a survey performed by Virginia Wood of IEPA, of the industries in the study area, it was determined that the majority of businesses in the area use municipal water for their potable water supply. Consequently, the industrial wells at Commonwealth Edison, Estwing Manufacturing, and Rockford Products were sampled despite the fact that the wells were not used for potable water supply. This modification was made in order to provide sample coverage in the large industrial areas in the northwest and west-central portions of the study area.

Other samples that were originally classified as residential in the Work Plan were reclassified in order to more accurately reflect the primary use of the establishment owning the well. These wells include the wells at 2613 11th Street (Rockford Cylinder Gas), 2955 11th Street (Tussing Tile and Flooring), 3015 11th Street (Smith Auto Repair), 3119 11th Street (Goodyear Tire Company), 3237 11th Street (McDonald's), 3329 11th Street (Pizza Hut), 2602 17th Street (East Rockford Collision Center), 1101 Brooke Road (Kincades Service), 3109 Collins (Corcoran's Body Shop), and 3333 Kishwaukee (Rock River Reclamation District). Given the variety of

commercial and industrial uses of these establishments, the wells have been reclassified as 'nonresidential.'

The ratio of QA/QC samples to investigative samples was slightly different than originally planned in the Work Plan. The ratios of field blanks, field duplicates, and matrix spike/matrix spike duplicates to investigative samples were approximately 1:12, 1:12, and 1:15, respectively, rather than 1:10, 1:10, and 1:20, as specified in the Work Plan.

3.0 NATURE AND EXTENT OF GROUNDWATER CONTAMINATION

As a result of the IEPA, USEPA and IDPH studies, a great deal of information regarding contamination levels in residential wells in the study area has been collected. In this section of the Technical Memorandum, analytical results from these studies are presented in both map and tabular format. Due to the large study area, graphically presentable information is necessarily shown on maps measuring approximately 18 inches by 36 inches. The maps appear in the map packet which accompanies this report, and the tables appear in the text.

As stated in the introduction to this report, the intention of the Technical Memorandum is to present the data gathered in this and other studies in order to summarize the current status of contamination of residential wells and to provide a site characterization background for the feasibility study and the Record of Decision. In this section of the report, the quality and compatibility of the analytical data generated during this and other studies are discussed, and the current status of groundwater contamination is presented.

3.1 DATA ASSESSMENT

Field QC samples were collected to determine the accuracy and precision of field sampling procedures and to aid in assessing the overall quality of the data. This subsection presents and discusses the analytical results for the QC samples and compares the data generated from the Operable Unit sampling event with the results of prior sampling events.

As discussed in Subsection 2.3.2, data validation was performed in accordance with the Laboratory Data Validation Functional Guidelines for Evaluating Organics (February 1, 1988) and Inorganics (July 1, 1988) Analyses, prepared by the USEPA Data Review Work Group. Qualifiers were applied to the data based on the results of analytical QC performed by the

laboratories. Data qualifiers follow standard usage as given in USEPA's Statement of Work for Organics Analysis (SOW No. 288) and Statement of Work for Inorganics Analysis (SOW No. 788), hence only a brief explanation of the data flags is given here. Table 3-1 provides an explanation of the data qualifiers used in this report. Overall, there were no significant problems or shortcomings in the data, and all of the data were found to be useable as flagged.

For inorganic analytes, data flagged with "ND" indicate that the analyte was detected at or below the instrument detection limit (IDL) without further qualification. Data flagged with a "B" indicates blank contamination. Blank contamination was ubiquitous but mostly present at low levels that required no further action on the part of the laboratories or by the data validators. A "J" flag signifies that the reported concentration is an estimated value. The value is estimated because one of several possible analytical QC parameters exceeded control limits that were specified in either the SAS request or the Functional Guidelines (July 1, 1988). A "UJ" qualifier means that an analyte is not detected but is still an estimated value because control limits for analytical QC were exceeded. An "R" flag represents data that were rejected on the basis of analytical QC results; only two metal values from the Operable Unit data were rejected.

The data qualifiers used in VOC data assessment are similar to those used in assessment of the metals data (Table 3-1). A "B" is used to indicate contamination in the method (laboratory) blank. A sample is flagged with "B" whenever an analyte is found in the associated method blank, regardless of the level of blank contamination. However, if the concentration of the sample is less than 5 times the concentration in the method blank for a particular compound, the "B" would be dropped and the sample would be flagged with "U". A "U" qualifier also means that the analyte was analyzed for but was not detected. Anytime the concentration of a compound found in the sample is less than 5 times the concentration of the same compound found in the corresponding trip blank, field blank, or method blank, the

Table 3-1
Explanation of Data Qualifiers

Metals

Qualifier	Definition
ND	Analyzed for but not detected
B	The analyte was found in the lab blank at below the CRDL *
J	The associated value is estimated because quality control criteria were not met
R	Data are not useable
UJ	Analyzed for but not detected. The associated value is an estimate and may be inaccurate or imprecise

VOCs

Qualifier	Definition
ND	Analyzed for but not detected
B	Sample concentration is greater than or equal to 5 times the method blank contamination
J	The associated value is estimated because quality control criteria were not met
U	Analyzed for but not detected
UJ	Analyzed for but not detected. The sample quantitation limit is an estimated quantity

*** CRDL = Contract Required Detection Limit**

sample is flagged with "U." A sample can also be flagged with "U" anytime a quality control specification is grossly exceeded, as specified in the validation guidelines. A sample that is flagged with "J" signifies that the associated numerical value is an estimated quantity. A sample is flagged with "J" because control limits for analytical quality control specifications were exceeded or the detected concentration was between the contract required detection limit (CRDL) and the instrument detection limit (IDL). In some cases, flags are combined, with "UJ" being the most common combination. A "UJ" indicates that a compound is not detected but is estimated because control limits for analytical QC were exceeded. No VOC data were rejected.

3.1.1 DISCUSSION OF QC SAMPLE RESULTS

Field blank data for metals and VOCs are presented in Tables 3-2 and 3-3, respectively. None of the metal analytes were detected above their respective IDLs (as listed at the bottom of Table 3-2), indicating that the field sampling and laboratory procedures did not introduce significant levels of metal contaminants.

The VOC field blanks invariably contained low levels of contamination for certain analytes (Table 3-3). Most of the contamination found in the field blanks was qualified as a result of either minor contamination in the method blank (flagged with "B") or due to very low analyte concentrations in the blanks falling between the IDL and CRDL (flagged with "J"). Field blanks represent worst-case situations because some of them were collected at industrial locations such as automobile repair shops, which can contain significant levels of air-borne VOCs that can become incorporated into the blanks. In general, however, the field blanks did not show significant levels of contamination. The trip blank data (Table 3-4) attests to the pervasiveness of low-level VOC contamination. Trip blanks consisting of reagent-grade distilled water were prepared in "VOC-free" environments and were never directly exposed to the atmosphere during any part of the sampling event or sample shipment. Hence they represent a best-case

Table 3-2
IEPA Field Blank Data, Metals

[redacted]

Residence	
Sample Number	508
Sample Date	6/11/90
Arsenic	ND
Cadmium	ND
Chromium	ND
Lead	ND

Smith Auto Repair	
Sample Number	513
Sample Date	6/12/90
Arsenic	ND
Cadmium	ND
Chromium	ND
Lead	ND

East Rockford Collision	
Sample Number	545
Sample Date	6/13/90
Arsenic	ND
Cadmium	ND
Chromium	ND
Lead	ND

Residence	
Sample Number	607
Sample Date	6/16/90
Arsenic	ND
Cadmium	ND
Chromium	ND
Lead	ND

Residence	
Sample Number	619
Sample Date	6/17/90
Arsenic	ND
Cadmium	ND
Chromium	ND
Lead	ND

[redacted]

Rockford Products	
Sample Number	645
Sample Date	6/19/90
Arsenic	ND
Cadmium	ND
Chromium	ND
Lead	ND

Residence	
Sample Number	562
Sample Date	6/13/90
Arsenic	ND
Cadmium	ND
Chromium	ND
Lead	ND

Residence	
Sample Number	568
Sample Date	6/14/90
Arsenic	ND
Cadmium	ND
Chromium	ND
Lead	ND

Residence	
Sample Number	595
Sample Date	6/15/90
Arsenic	ND
Cadmium	ND
Chromium	ND
Lead	ND

Residence	
Sample Number	633
Sample Date	6/18/90
Arsenic	ND
Cadmium	ND
Chromium	ND
Lead	ND

- Instrument Detection Limits (µg/l)
  - As 2.0
  - Cd 0.1
  - Cr 10.0
  - Pb 1.0

- ND = Not Detected

Table 3-3
IEPA Field Blank Data, VOCs

Residence	
Sample Number	08
Sample Date	6/11/90
TCE	0.1J
1,1,1-TCA	0.4J
cis-1,2-DCE	0.0J
trans-1,2-DCE	0.0J
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	0.0J
PCE	0.0J
Vinyl Chloride	ND

Smith Auto Repair	
Sample Number	13
Sample Date	6/12/90
TCE	0.1JB
1,1,1-TCA	0.3JB
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.0JB
Vinyl Chloride	ND

East Rockford Collision	
Sample Number	45
Sample Date	6/13/90
TCE	0.1JB
1,1,1-TCA	0.4J
cis-1,2-DCE	0.0JB
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.0JB
Vinyl Chloride	ND

Residence	
Sample Number	107
Sample Date	6/16/90
TCE	0.1JB
1,1,1-TCA	0.5B
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.1JB
Vinyl Chloride	ND

Residence	
Sample Number	119
Sample Date	6/17/90
TCE	0.1JB
1,1,1-TCA	0.3J
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.0JB
Vinyl Chloride	ND

Rockford Products	
Sample Number	145
Sample Date	6/19/90
TCE	0.1JB
1,1,1-TCA	0.3JB
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.1JB
Vinyl Chloride	ND

Residence	
Sample Number	62
Sample Date	6/13/90
TCE	0.1JB
1,1,1-TCA	1.7
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.1JB
Vinyl Chloride	ND

Residence	
Sample Number	68
Sample Date	6/14/90
TCE	0.1J
1,1,1-TCA	0.4J
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.1J
Vinyl Chloride	ND

Residence	
Sample Number	95
Sample Date	6/15/90
TCE	0.1J
1,1,1-TCA	0.5
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.1JB
Vinyl Chloride	ND

Residence	
Sample Number	133
Sample Date	6/18/90
TCE	0.5JB
1,1,1-TCA	1.0J
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.3JB
Vinyl Chloride	ND

• All concentrations in µg/l

• ND = Not Detected, J = Estimated Value, B = Blank Contamination

Table 3-4
IEPA Trip Blank Data

Sample Number 01	
Sample Date	6/11/90
TCE	0.0J
1,1,1-TCA	0.0J
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.0J
Vinyl Chloride	ND

Sample Number 11	
Sample Date	6/12/90
TCE	0.1JB
1,1,1-TCA	0.1JB
cis-1,2-DCE	0.2JB
trans-1,2-DCE	ND
1,2-DCA	0.1JB
1,1-DCA	0.2JB
1,1-DCE	0.1JB
PCE	0.0JB
Vinyl Chloride	0.0J

Sample Number 23	
Sample Date	6/12/90
TCE	0.0JB
1,1,1-TCA	0.1J
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.1JB
Vinyl Chloride	ND

Sample Number 35	
Sample Date	6/13/90
TCE	0.0JB
1,1,1-TCA	0.0J
cis-1,2-DCE	0.1JB
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.0JB
Vinyl Chloride	ND

Sample Number 74	
Sample Date	6/14/90
TCE	0.0JB
1,1,1-TCA	ND
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.1JB
Vinyl Chloride	ND

Sample Number 91	
Sample Date	6/15/90
TCE	ND
1,1,1-TCA	ND
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.0JB
Vinyl Chloride	ND

Sample Number 101	
Sample Date	6/16/90
TCE	0.1JB
1,1,1-TCA	0.0JB
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.1JB
Vinyl Chloride	ND

Sample Number 123	
Sample Date	6/18/90
TCE	0.0JB
1,1,1-TCA	0.0J
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.0JB
Vinyl Chloride	ND

Sample Number 137	
Sample Date	6/19/90
TCE	0.1JB
1,1,1-TCA	0.1JB
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.0JB
Vinyl Chloride	ND

Sample Number 151	
Sample Date	6/20/90
TCE	0.0JB
1,1,1-TCA	ND
cis-1,2-DCE	ND
trans-1,2-DCE	ND
1,2-DCA	ND
1,1-DCA	ND
1,1-DCE	ND
PCE	0.0JB
Vinyl Chloride	ND

• All concentrations in µg/l

• ND = Not Detected, J = Estimated Value, B = Blank Contamination

situation with respect to VOC contamination, making the trip blanks a useful reference against which field blank contamination can be judged. Comparison of Tables 3-3 and 3-4 shows that VOC levels are similar for trip blanks and field blanks, suggesting that contamination during field sampling was not significant compared with trip blank contamination. Furthermore, the low levels of VOCs in the trip blanks indicate that contamination from shipping was negligible. Overall, VOC levels in field blanks were somewhat greater than trip blank VOC levels, which is not surprising given the possibility for air-borne contamination accompanying field sampling conditions.

Field duplicates were collected in order to assess the overall precision of field sampling and laboratory procedures. The Relative Percent Difference (RPD) was calculated for each duplicate pair except in cases where one or both of the concentration values fell at or below the detection limit, or where values were reported as not detected. Overall, the correlation among duplicates was good. Results for sample/field duplicate pairs and the RPDs are listed for metals and for VOCs in Tables 3-5 and 3-6, respectively.

For the metals, one or both concentrations for the sample/field duplicate pairs were frequently found to be at or below the IDL. This makes it difficult to judge the reproducibility of the metals data because the absolute concentration values can not be determined. However it should be noted that most of the duplicate pairs had both results reported as not detected, which indicates good reproducibility even though an RPD could not be calculated. Review of the analytical results listed in Table 3-5 indicates that the reported concentrations for samples and duplicates are closely matched. The RPDs for the metals duplicates were less than 30% RPD for all samples except lead at 2315 Harrison, which had a 84% RPD (Table 3-5). Such a large RPD is misleading when it occurs for a sample with low concentration because a small difference in reported values can produce large RPDs. In general, the metals duplicates indicate good reproducibility.

Table 3-7
Analytical Results for Multiple Samples
(USEPA vs IDPH Data)

(All concentrations in µg/l)

Sampling Agency	USEPA	IDPH
Sample Date	10/5/89	8/9/88
TCE	27.2	ND
1,1,1-TCA	68.4	ND
cis-1,2-DCE	21.3	ND
trans-1,2-DCE	ND	ND
1,2-DCA	ND	ND
1,1-DCA	22.0	ND
1,1-DCE	*	ND
PCE	*	ND
Vinyl Chloride	*	ND

Sampling Agency	USEPA	IDPH
Sample Date	10/4/89	8/9/88
TCE	2.9	0.5
1,1,1-TCA	27.5	3.2
cis-1,2-DCE	11.5	ND
trans-1,2-DCE	ND	ND
1,2-DCA	ND	ND
1,1-DCA	29.9	0.2
1,1-DCE	*	ND
PCE	*	ND
Vinyl Chloride	*	ND

Sampling Agency	USEPA	IDPH
Sample Date	10/3/89	8/21/89
TCE	ND	ND
1,1,1-TCA	ND	ND
cis-1,2-DCE	ND	ND
trans-1,2-DCE	ND	ND
1,2-DCA	ND	ND
1,1-DCA	ND	ND
1,1-DCE	*	ND
PCE	*	ND
Vinyl Chloride	*	ND

Sampling Agency	USEPA	IDPH
Sample Date	10/3/89	11/6/89
TCE	3.1	4.2
1,1,1-TCA	7.7	11.2
cis-1,2-DCE	1.9	ND
trans-1,2-DCE	ND	ND
1,2-DCA	ND	ND
1,1-DCA	1.2	ND
1,1-DCE	*	1.2
PCE	*	Trace
Vinyl Chloride	*	ND

Sampling Agency	USEPA	IDPH
Sample Date	10/4/89	10/17/89
TCE	37.0	47.1
1,1,1-TCA	88.3	89.1
cis-1,2-DCE	24.1	ND
trans-1,2-DCE	ND	ND
1,2-DCA	0.5	ND
1,1-DCA	23.8	16.3
1,1-DCE	*	9.4
PCE	*	0.7
Vinyl Chloride	*	ND

Sampling Agency	USEPA	IDPH
Sample Date	10/4/89	9/8/88
TCE	15.5	6.4
1,1,1-TCA	35.6	56.0
cis-1,2-DCE	*	ND
trans-1,2-DCE	*	ND
1,2-DCA	ND	ND
1,1-DCA	12.4	2.0
1,1-DCE	7.7	1.4
PCE	ND	0.2
Vinyl Chloride	ND	ND

Sampling Agency	USEPA	IDPH
Sample Date	10/5/89	9/19/89
TCE	17.8	20.9
1,1,1-TCA	62.9	81.0
cis-1,2-DCE	11.9	ND
trans-1,2-DCE	ND	ND
1,2-DCA	ND	ND
1,1-DCA	10.9	12.6
1,1-DCE	*	0.8
PCE	*	ND
Vinyl Chloride	*	ND

Sampling Agency	USEPA	IDPH
Sample Date	10/3/89	9/26/89
TCE	120.0	121.7
1,1,1-TCA	283.0	57.5
cis-1,2-DCE	138.0	ND
trans-1,2-DCE	2.5	ND
1,2-DCA	4.0	ND
1,1-DCA	133.0	46.8
1,1-DCE	*	<1
PCE	*	15.1
Vinyl Chloride	*	ND

ND = Not Detected

* = Not Analyzed for

Table 3-7 cont.
Analytical Results for Multiple Samples
(USEPA vs IDPH Data)

(All concentrations in µg/l)

[redacted]			
Sampling Agency	USEPA	IDPH	IDPH
Sample Date	10/5/89	9/13/88	6/20/89
TCE	19.1	68.0	73.4
1,1,1-TCA	201.0	98.0	204.0
cis-1,2-DCE	47.5	ND	ND
trans-1,2-DCE	0.6	ND	ND
1,2-DCA	1.0	ND	0.9
1,1-DCA	43.8	25.0	ND
1,1-DCE	*	3.8	52.2
PCE	*	3.2	3.3
Vinyl Chloride	*	ND	ND

[redacted]			
Sampling Agency	USEPA	USEPA	IDPH
Sample Date	10/5/89	10/5/89	9/26/89
TCE	29.9	30.0	50.0
1,1,1-TCA	158.0	160.0	224.2
cis-1,2-DCE	29.2	28.4	ND
trans-1,2-DCE	ND	ND	ND
1,2-DCA	0.8	0.8	ND
1,1-DCA	32.2	32.6	25.2
1,1-DCE	*	*	2.7
PCE	*	*	4.1
Vinyl Chloride	*	*	ND

[redacted]			
Sampling Agency	USEPA	USEPA	IDPH
Sample Date	8/9/89	10/24/89	8/9/88
TCE	35.4	36.8	140.0
1,1,1-TCA	*	158.0	140.0
cis-1,2-DCE	*	40.4	ND
trans-1,2-DCE	*	ND	ND
1,2-DCA	*	1.1	ND
1,1-DCA	320.0	38.2	13.0
1,1-DCE	47.8	*	2.0
PCE	1.32J	*	4.8
Vinyl Chloride	ND	*	ND

ND = Not Detected

* = Not Analyzed for

Table 3-8
Analytical Results for Multiple Samples
(IEPA vs IDPH Data)

(All concentrations in µg/l)

[redacted]		
Sampling Agency	IEPA	IDPH
Sample Date	6/14/90	12/8/89
TCE	8.3	5.6
1,1,1-TCA	27.9	ND
cis-1,2-DCE	4.7	ND
trans-1,2-DCE	0.1J	Trace
1,2-DCA	0.3J	22.5
1,1-DCA	4.3	Trace
1,1-DCE	4.3	2.8
PCE	ND	Trace
Vinyl Chloride	ND	ND

[redacted]		
Sampling Agency	IEPA	IDPH
Sample Date	6/14/90	12/11/89
TCE	ND	ND
1,1,1-TCA	3.2U	ND
cis-1,2-DCE	ND	ND
trans-1,2-DCE	ND	2.2
1,2-DCA	ND	ND
1,1-DCA	0.1J	ND
1,1-DCE	0.2J	ND
PCE	ND	ND
Vinyl Chloride	ND	ND

[redacted]		
Sampling Agency	IEPA	IDPH
Sample Date	6/15/90	12/4/89
TCE	2.3B	1.0
1,1,1-TCA	4.7	3.2
cis-1,2-DCE	0.5	ND
trans-1,2-DCE	ND	ND
1,2-DCA	ND	ND
1,1-DCA	0.7	ND
1,1-DCE	0.5J	ND
PCE	ND	ND
Vinyl Chloride	ND	ND

[redacted]		
Sampling Agency	IEPA	IDPH
Sample Date	6/13/90	12/5/89
TCE	0.9B	0.9
1,1,1-TCA	2.5	2.2
cis-1,2-DCE	ND	ND
trans-1,2-DCE	ND	ND
1,2-DCA	ND	ND
1,1-DCA	0.1J	Trace
1,1-DCE	0.1J	ND
PCE	ND	Trace
Vinyl Chloride	ND	ND

[redacted]		
Sampling Agency	IEPA	IDPH
Sample Date	6/14/90	12/12/89
TCE	ND	ND
1,1,1-TCA	ND	ND
cis-1,2-DCE	ND	ND
trans-1,2-DCE	ND	ND
1,2-DCA	ND	ND
1,1-DCA	ND	ND
1,1-DCE	ND	ND
PCE	ND	ND
Vinyl Chloride	ND	ND

[redacted]		
Sampling Agency	IEPA	IDPH
Sample Date	6/15/90	11/6/89
TCE	1.7B	2.1
1,1,1-TCA	3.1	4.1
cis-1,2-DCE	0.1J	ND
trans-1,2-DCE	ND	ND
1,2-DCA	ND	ND
1,1-DCA	0.2J	ND
1,1-DCE	0.2J	ND
PCE	ND	ND
Vinyl Chloride	ND	ND

[redacted]		
Sampling Agency	IEPA	IDPH
Sample Date	6/13/90	12/5/89
TCE	ND	ND
1,1,1-TCA	ND	ND
cis-1,2-DCE	ND	ND
trans-1,2-DCE	ND	ND
1,2-DCA	ND	ND
1,1-DCA	ND	ND
1,1-DCE	ND	ND
PCE	ND	Trace
Vinyl Chloride	ND	ND

[redacted]		
Sampling Agency	IEPA	IDPH
Sample Date	6/13/90	8/21/89
TCE	2.0B	1.5
1,1,1-TCA	2.8	2.7
cis-1,2-DCE	ND	ND
trans-1,2-DCE	ND	ND
1,2-DCA	0.1J	ND
1,1-DCA	0.3J	ND
1,1-DCE	0.4J	0.3
PCE	0.3J	ND
Vinyl Chloride	ND	ND

• ND= Not Detected, U = Not Detected in Dilution, J = Estimated Value, B = Blank Contamination

IDPH and USEPA samples, but the reported values for 1,1,1-TCA, cis-1,2-DCE, and 1,1-DCA differ by factors ranging from 3 to 276. The match between IEPA and IDPH sample analyses is somewhat better, but there are significant differences among reported concentrations for these multiple samples as well (Table 3-8). For example, at 2810 8th Street, IEPA reports a TCE concentration of 27.9 ppb, whereas IDPH reports a non-detect. At the same location, IEPA reports an estimated 1,2-DCA concentration of 0.3 ppb, whereas IDPH reports 22.5 ppb.

Given these differences in contaminant concentrations reported by different agencies for the same locations, it is clear that the three data sets considered in this investigation are not consistent, and could not be presented together. Because the QA/QC procedures, detection limits, and sample collection techniques are known to be comparable for both the IEPA and USEPA samples, the IEPA and USEPA analytical results were used together to form the primary data set for this investigation. The IDPH sample results are presented separately, and are intended to be used as supplementary data, to complement the primary IEPA/USEPA data set.

As mentioned above, there are no locations that were sampled by both IEPA and USEPA, and therefore it is not possible to directly compare the two data sets. Review of sample results for sample locations geographically close to each other (such as the IEPA and USEPA samples on Lindberg Drive, near Sawyer Road and Marshall Street, and near Lapey Street and Brooke Road) show close agreement. Therefore, the 2 data sets appear to be compatible.

3.2 VOLATILE ORGANIC CONTAMINATION

Groundwater contamination by VOCs at levels ranging from non-detect to hundreds of parts per billion has been established by analytical results from IDPH, USEPA, and IEPA samples. Contaminants of concern in the study area were identified based on previous sampling by IDPH and USEPA, as discussed in Section 2.4 of the Operable Unit Work Plan. The contaminants

of concern and detection limits associated with the analytical procedures used for the IEPA Operable Unit are listed in Table 3-9. Detection limits for analytical procedures used in this investigation are discussed in Section 5.3 of the Quality Assurance Project Plan (QAPP). Analytical results for VOCs from each of the three studies are presented in both tables and maps. VOC data generated from the IEPA Operable Unit study are presented in Table 3-10. Data from the USEPA and IDPH investigations are presented in Tables 3-11 and 3-12, respectively. To assist in locating addresses within the study area that correspond to the analytical results listed in the tables, a comprehensive address map of all addresses in the study area is included as Figure 3-1 in the map packet. Maps of IEPA/USEPA and IDPH sample locations are also included with the map packet as Figures 3-2 and 3-3, respectively.

3.2.1 DATA DISPLAY AND CONTOURING

Based on the analytical data presented in Tables 3-10 through 3-12, plume contour maps depicting the distribution and levels of groundwater contamination across the study area were prepared for each of the nine VOC contaminants of concern. The plume of VOC-contaminated groundwater is shown in the maps as a base map of the study area on which numerical values for contaminant concentrations, laboratory flags, and concentration contours are overlain. The numerical concentration values depicted on the maps are expressed in parts per billion (ppb), which have been rounded to one decimal place to facilitate display and contouring of the data. Laboratory flags displayed on the figures are discussed in the text in Subsection 3.1 and given in Table 3-1. Because of the data incompatibilities discussed in Subsection 3.1.2, the IDPH data has been presented separately from the IEPA and USEPA data.

The contouring process is interpretational, and involves extrapolating contour lines through areas that may have little or no data. As a consequence, the drawings presented with this report represent one of many possible interpretations of the actual configuration of the plume. A

Table 3-9
Contaminants Analyzed and Detection Limits for Operable Unit Samples

Contaminant	Abbreviation	Operable Unit Detection Limit (ppb)
Trichloroethene	TCE	0.5
1,1,1-Trichloroethane	1,1,1-TCA	0.5
cis-1,2-Dichloroethene	cis-1,2-DCE	0.5
trans-1,2-Dichloroethene	trans-1,2-DCE	0.5
1,2-Dichloroethane	1,2-DCA	0.5
1,1-Dichloroethane	1,1-DCA	0.5
1,1-Dichloroethene	1,1-DCE	0.5
Tetrachloroethene	PCE	0.5
Vinyl Chloride		0.25
Arsenic	As	2.0
Cadmium	Cd	0.1
Chromium	Cr	10.0
Lead	Pb	1.0

Table 3-10
IEPA VOC Data
(All concentrations in µg/l)

Address	Street No.	Sample No.	Sampling Agency	DATE	TCE	1,1,1-TCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	1,1-DCA	1,1-DCE	PCE	Vinyl Chloride
4th	[redacted]	7	IEPA	6/11/90	17.0B	24.9B	13.6B	ND	2.6B	21.0B	7.5B	2.1B	ND
4th		9	IEPA	6/11/90	18.4B	28.8B	13.1B	ND	2.2B	18.4B	8.7B	2.0B	ND
4th		18	IEPA	6/12/90	29.2B	61.8	22.5	0.2J	3.2B	30.7	25.3	4.1B	ND
4th		70/71	IEPA	6/14/90	36.0B	2.7	1.0	ND	ND	0.2J	0.1J	9.7B	ND
5th		77	IEPA	6/15/90	2.8B	1.7U	14.1	0.2J	ND	0.3J	0.3J	2.1B	ND
7th		82	IEPA	6/15/90	1.1B	3.0	0.1J	ND	ND	ND	ND	1.3B	ND
7th		53	IEPA	6/13/90	1.5B	3.1	ND	ND	0.3J	0.4J	0.2J	6.8B	ND
7th		64	IEPA	6/14/90	ND	0.9U	ND	ND	ND	0.0J	ND	ND	ND
8th		130	IEPA	6/18/90	10.0U	528.10	24.7	0.9J	5.7J	533.2	109.7	10.0U	9.1
8th		58	IEPA	6/14/90	8.3	27.9	4.7	0.1J	0.3J	4.3	4.3	ND	ND
8th		73	IEPA	6/14/90	ND	1.8U	ND	ND	ND	0.2J	ND	15.1B	ND
8th		116	IEPA	6/17/90	ND	2.1	ND	ND	ND	0.5	ND	ND	ND
8th		120	IEPA	6/18/90	1.8B	3.3	0.1J	ND	ND	0.3J	0.1J	0.3J	ND
8th		118	IEPA	6/17/90	2.5B	3.9	0.2J	ND	ND	0.3J	0.2J	1.0B	ND
8th		46	IEPA	6/13/90	ND	0.6U	ND	ND	ND	ND	ND	ND	ND
8th		40	IEPA	6/13/90	1.0	1.5U	ND	ND	ND	0.2J	0.1J	1.8	ND
8th		39	IEPA	6/13/90	0.6	1.2U	ND	ND	ND	0.1J	0.0J	0.5	ND
8th		41	IEPA	6/13/90	ND	ND	ND	ND	ND	ND	ND	0.2J	ND
9th		96	IEPA	6/14/90	0.4J	1.0U	0.2J	ND	ND	0.1J	ND	ND	ND
9th		112	IEPA	6/18/90	2.1B	3.8	0.2J	ND	ND	0.3J	0.2J	ND	ND
9th		87	IEPA	6/15/90	2.0B	3.2	0.1J	ND	ND	0.4J	0.3J	2.4B	ND
9th		65	IEPA	6/14/90	ND	1.9	ND	ND	ND	0.1J	ND	ND	ND
10th		56/57	IEPA	6/13/90	2.9B	5.2U	ND	ND	ND	0.2J	0.2J	ND	ND
11th		127	IEPA	6/18/90	14.3B	73.3	20.5	0.2J	0.4J	13.7	7.8	ND	ND
11th		4	IEPA	6/11/90	1.0	1.3U	11.2	0.1J	0.1J	0.1J	0.1J	ND	ND
11th		14	IEPA	6/12/90	3.3B	6.3B	0.5U	ND	ND	0.7U	0.5J	ND	ND
11th		17	IEPA	6/12/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
11th		80	IEPA	6/15/90	0.9B	2.1	ND	ND	ND	ND	ND	0.7B	ND
11th		79	IEPA	6/15/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
16th		52	IEPA	6/13/90	3.1B	7.0	1.5B	ND	ND	1.1	1.1	0.7B	ND
16th		400	IEPA	6/13/90	1.3B	2.9	ND	ND	ND	0.1J	0.2J	0.4J	ND
17th		44	IEPA	6/13/90	1.1B	29.1	2.5B	ND	0.2J	2.5	1.0	0.2J	ND
17th		51	IEPA	6/13/90	2.0B	2.8	ND	ND	0.1J	0.3J	0.4J	0.3J	ND
18th		61	IEPA	6/13/90	ND	3.2U	ND	ND	ND	0.1J	0.2J	ND	ND
20th		121	IEPA	6/18/90	ND	0.2J	0.1J	ND	0.2J	0.8	0.1J	ND	ND
20th		42	IEPA	6/18/90	1.2B	1.4U	ND	ND	ND	0.1J	0.1J	0.2J	ND
Barnum		150	IEPA	6/20/90	0.5B	0.3J	0.1J	ND	ND	ND	ND	ND	ND
Barry		132	IEPA	6/18/90	427.6B	6.5	99.4	0.6	ND	0.6	0.7	0.6B	ND
Bildahl		141	IEPA	6/19/90	ND	ND	0.1J	ND	ND	0.3J	ND	ND	ND
Bildahl		148	IEPA	6/19/90	ND	ND	0.1J	ND	1.6	0.9	ND	ND	ND
Bildahl		92	IEPA	6/15/90	1.6	2.9	0.1J	ND	ND	0.2J	0.1J	ND	ND
Bildahl		109/110	IEPA	6/16/90	2.7B	4.2B	ND	ND	ND	ND	ND	ND	ND
Bildahl		94	IEPA	6/15/90	2.2	3.8	0.2J	ND	ND	0.4J	0.2J	2.3B	ND
Bildahl		111	IEPA	6/16/90	1.9B	2.7B	ND	ND	ND	ND	ND	2.6B	ND
Bildahl		98	IEPA	6/15/90	ND	1.0U	ND	ND	ND	ND	ND	ND	ND
Bildahl		99	IEPA	6/15/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
Brooke		117	IEPA	6/18/90	125.9B	1.2U	7.4	0.1J	0.1J	1.1	0.6	4.0B	ND
Brooke		29	IEPA	6/12/90	ND	0.7U	ND	ND	ND	0.7U	ND	ND	ND
Brooke		19	IEPA	6/12/90	ND	ND	13.6	ND	ND	ND	ND	ND	ND
Brooke		26	IEPA	6/12/90	2.4B	3.8B	1.0U	0.1J	ND	0.6U	0.6	2.0B	ND
Brooke		27/28	IEPA	6/12/90	19.7B	43.0B	8.0	0.1J	1.7	12.0	5.9	ND	ND
Brooke		139	IEPA	6/19/90	0.7B	2.2B	0.1J	ND	0.3J	1.1	0.1J	ND	ND
Brooke		81	IEPA	6/15/90	1.6B	4.5	0.4J	ND	ND	0.7	0.4J	ND	ND
Brooke		84	IEPA	6/15/90	2.3B	4.7	0.5	ND	ND	0.7	0.5J	ND	ND
Collins		43	IEPA	6/13/90	2.0B	8.6B	2.1	ND	ND	2.1	1.4	0.1J	ND
Collins		75	IEPA	6/14/90	0.6B	1.9U	ND	ND	ND	0.4J	0.1J	ND	ND
Collins		105	IEPA	6/16/90	ND	ND	ND	ND	0.1J	0.5B	ND	ND	ND
Collins		108	IEPA	6/16/90	2.0B	2.9B	ND	ND	ND	ND	ND	ND	ND
Collins		60	IEPA	6/14/90	ND	1.0U	ND	ND	ND	0.1J	ND	0.5J	ND
Collins		50	IEPA	6/13/90	0.9B	2.5	ND	ND	ND	0.1J	0.1J	ND	ND
Energy		76	IEPA	6/14/90	101.6B	15.7	11.2	ND	0.5J	2.8	3.3	24.0B	ND
Grant		106	IEPA	6/16/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
Grant		115	IEPA	6/18/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hamilton		124	IEPA	6/18/90	1.9B	3.0	0.1J	ND	ND	0.2J	0.2J	ND	ND

• ND = Not Detected, U = Not Detected in Dilution, J = Estimated Value, B = Blank Contamination

Table 3-10 cont.
IEPA VOC Data
(All concentrations in µg/l)

Address	Street No.	Sample No.	Sampling Agency	DATE	TCE	1,1,1-TCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	1,1-DCA	1,1-DCE	PCE	Vinyl Chloride
Hamilton	[redacted]	2	IEPA	6/11/90	0.8	1.3U	ND	ND	ND	0.1J	0.1J	ND	ND
Harrison	[redacted]	146/147	IEPA	6/19/90	41.4B	93.5B	42.6	0.2J	4.5J	43.7	34.9	10.4B	0.7
Harrison	[redacted]	100	IEPA	6/15/90	3.3	33.4	5.8	0.1J	ND	8.0	1.5	0.7B	ND
Harrison	[redacted]	126	IEPA	6/18/90	62.8B	990.8	22.2	0.1J	ND	16.5	25.4	1.0B	ND
Harrison	[redacted]	47/48	IEPA	6/13/90	0.4J	10.5	0.4J	ND	0.1J	1.8	0.9	ND	ND
Horton	[redacted]	88/89	IEPA	6/15/90	0.8B	1.9U	ND	ND	ND	ND	0.1J	ND	ND
Johnson	[redacted]	3&5	IEPA	6/11/90	ND	ND	0.2J	ND	0.2J	0.0J	ND	ND	ND
Kennon	[redacted]	149	IEPA	6/19/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
Kennon	[redacted]	140	IEPA	6/19/90	6.8B	1.3B	2.4	ND	ND	0.1J	ND	545.0	ND
Kishwaukee	[redacted]	135	IEPA	6/19/90	13.4B	5.4B	1.3	ND	0.4J	2.0	1.4	ND	ND
Kishwaukee	[redacted]	90	IEPA	6/15/90	ND	3.4	ND	ND	ND	ND	ND	0.4J	ND
Kishwaukee	[redacted]	66	IEPA	6/14/90	ND	1.8U	ND	ND	0.2J	0.2J	0.1J	1.8B	ND
Kishwaukee	[redacted]	67	IEPA	6/14/90	ND	2.5	ND	ND	ND	ND	ND	1.2B	ND
Kishwaukee	[redacted]	131	IEPA	6/18/90	1.3B	0.9U	0.2J	ND	0.0J	1.4	0.7	ND	ND
Lapey	[redacted]	142/143	IEPA	6/19/90	2.2B	4.3B	0.3J	ND	ND	0.5J	0.3J	0.6B	ND
Lapey	[redacted]	104	IEPA	6/16/90	1.8B	2.8B	ND	ND	ND	ND	ND	ND	ND
Lapey	[redacted]	103	IEPA	6/16/90	2.7B	4.0B	ND	ND	ND	0.4J	ND	ND	ND
Lapey	[redacted]	97	IEPA	6/15/90	1.4	2.6U	0.1J	ND	ND	0.2J	ND	ND	ND
Lapey	[redacted]	69	IEPA	6/14/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lapey	[redacted]	72	IEPA	6/14/90	ND	0.7U	ND	ND	ND	ND	ND	ND	ND
Lindale	[redacted]	38	IEPA	6/13/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lindale	[redacted]	21	IEPA	6/12/90	1.1B	1.7	ND	ND	ND	ND	ND	0.9B	ND
Lindberg	[redacted]	22	IEPA	6/12/90	1.6B	ND	ND	ND	ND	1.3	0.3J	ND	ND
Lindberg	[redacted]	59	IEPA	6/14/90	3.2B	5.8U	1.1B	ND	0.2J	0.9	0.8	0.6B	ND
Lyran	[redacted]	10	IEPA	6/11/90	ND	1.2U	ND	ND	ND	ND	ND	1.1B	ND
Lyran	[redacted]	12	IEPA	6/12/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
Marshall	[redacted]	63	IEPA	6/14/90	ND	ND	ND	ND	ND	0.2J	0.1J	ND	ND
Marshall	[redacted]	83	IEPA	6/15/90	1.8B	3.4	0.1J	ND	ND	0.3J	0.3J	ND	ND
Martin	[redacted]	54	IEPA	6/13/90	4.8B	0.9U	2.0B	ND	0.3J	0.1J	0.3J	4.7B	ND
Mattis	[redacted]	24	IEPA	6/12/90	31.9B	59.5	17.0	0.1J	2.8B	26.9	20.1	3.2B	ND
New Milford	[redacted]	138	IEPA	6/18/90	13.8B	10.0B	0.5J	ND	ND	0.6	1.2	4.6B	ND
Olsen	[redacted]	20	IEPA	6/12/90	10.2B	ND	2.0	ND	ND	ND	ND	127.3	ND
Pershing	[redacted]	86	IEPA	6/15/90	1.7B	3.1	0.1J	ND	ND	0.2J	0.2J	ND	ND
Pershing	[redacted]	85	IEPA	6/15/90	2.1B	4.1	0.5J	ND	ND	0.5J	0.4J	ND	ND
Ranger	[redacted]	6	IEPA	6/12/90	21.4B	31.6B	14.4B	ND	2.8B	21.6B	11.4B	2.1B	0.1J
River Blvd.	[redacted]	16	IEPA	6/12/90	111.4B	1.2U	13.4B	ND	ND	1.0U	0.6B	1.4B	ND
River Blvd.	[redacted]	136	IEPA	6/19/90	ND	ND	0.2J	ND	ND	0.2J	ND	ND	ND
River Blvd.	[redacted]	113/114	IEPA	6/17/90	ND	ND	0.3J	ND	ND	0.2J	ND	ND	ND
Rock River	[redacted]	30	IEPA	6/12/90	170.8B	12.5U	1233.0B	12.5U	12.5U	12.5U	12.5U	12.5U	113.5
Roosevelt	[redacted]	128	IEPA	6/18/90	0.9B	2.4	0.1J	ND	ND	0.3J	0.2J	2.4B	ND
Sandy Hlw	[redacted]	102	IEPA	6/16/90	ND	0.7U	ND	ND	ND	ND	ND	ND	ND
Sandy Hlw	[redacted]	125	IEPA	6/18/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sandy Hlw	[redacted]	122	IEPA	6/18/90	ND	ND	ND	ND	ND	ND	ND	0.3J	ND
Sandy Hlw	[redacted]	49	IEPA	6/13/90	ND	ND	ND	ND	ND	ND	ND	0.2J	ND
Sandy Hlw	[redacted]	37	IEPA	6/13/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
Saner	[redacted]	25	IEPA	6/12/90	1.7B	1.8B	0.7U	0.1J	ND	ND	0.4J	1.0B	ND
Saner	[redacted]	134	IEPA	6/18/90	0.7B	2.0B	0.1J	ND	ND	0.4J	0.2J	2.8B	ND
Saner	[redacted]	78	IEPA	6/15/90	ND	1.0U	ND	ND	ND	ND	ND	ND	ND
Sawyer	[redacted]	36	IEPA	6/13/90	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sewell	[redacted]	144	IEPA	6/19/90	0.7	39.3	0.2J	ND	ND	1.5	1.2	ND	ND
Sewell	[redacted]	93	IEPA	6/15/90	ND	0.5U	ND	ND	ND	ND	ND	ND	ND
South	[redacted]	15	IEPA	6/12/90	18.2B	71.1	2.1	0.0J	ND	ND	3.2	ND	ND
Taft	[redacted]	129	IEPA	6/18/90	ND	1.4	ND	ND	ND	0.1J	ND	1.1B	ND

• ND = Not Detected, U = Not Detected in Dilution, J = Estimated Value, B = Blank Contamination

Table 3-11
USEPA VOC Data
(All concentrations in µg/l)

Address	Street No.	Sampling Agency	Sample No.	DATE 1989	TCE	1,1,1-TCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	1,1-DCA	1,1-DCE	PCE	Vinyl Chloride
9th	[redacted]	USEPA	S80	10/5/89	ND	3.0J	NA	NA	ND	ND	ND	ND	ND
9th		USEPA	S81	10/5/89	0.6	2.0	ND	ND	ND	ND	NA	NA	NA
9th		USEPA	S82	10/5/89	ND	0.6	ND	ND	ND	ND	NA	NA	NA
10th		USEPA	S9	10/26/89	28.0	142.0	29.6	ND	ND	31.3	NA	NA	NA
10th		USEPA	S69	10/5/89	2.0	4.3	ND	ND	ND	ND	NA	NA	NA
11th		USEPA	S14	10/26/89	34.8	167.0	42.9	ND	ND	40.4	NA	NA	NA
11th		USEPA	S15	10/26/89	9.9	54.5	7.2	ND	ND	8.3	NA	NA	NA
11th		USEPA	S68	10/5/89	27.2	68.4	21.3	ND	ND	22.0	NA	NA	NA
11th		USEPA	S72	10/5/89	10.5	35.2	5.2	ND	ND	4.8	NA	NA	NA
11th		USEPA	S75	10/5/89	3.4	13.2	2.4	ND	ND	2.0	NA	NA	NA
17th		USEPA	S13	10/3/89	1.3	2.5	ND	ND	ND	ND	NA	NA	NA
18th		USEPA	S16	10/26/89	1.4	7.6	5.2	ND	ND	10.1	NA	NA	NA
18th		USEPA	S12	10/3/89	2.7	9.3	3.3	ND	ND	1.8	NA	NA	NA
19th		USEPA	S10	10/3/89	0.8	1.1	ND	ND	ND	ND	NA	NA	NA
20th		USEPA	S11	10/3/89	120.0	283.0	138.0	2.5	4.0	133.0	NA	NA	NA
20th		USEPA	S100	10/24/89	16.3	88.4	29.8	ND	ND	18.2	NA	NA	NA
20th		USEPA	S102	10/24/89	2.2	11.3	2.5	ND	ND	ND	NA	NA	NA
20th		USEPA	S9	10/3/89	ND	ND	ND	ND	ND	ND	NA	NA	NA
21st		USEPA	S95	10/24/89	68.4	297.0	96.4	1.2	1.5	81.9	NA	NA	NA
21st		USEPA	S97	10/24/89	73.8	306.0	95.0	ND	ND	64.3	NA	NA	NA
21st		USEPA	S6	10/3/89	31.7	151.0	94.6	ND	2.0	40.7	NA	NA	NA
22nd		USEPA	S5	10/3/89	67.1	227.0	NA	NA	4.0J	109.0	43.2	6.7	ND
22nd		USEPA	S98	10/24/89	56.2	235.0	37.8	ND	ND	33.9	NA	NA	NA
22nd		USEPA	S94	10/24/89	17.0	75.7	42.3	ND	0.6	25.6	NA	NA	NA
23rd		USEPA	S93	10/24/89	91.3	384.0	113.0	1.2	2.1	76.1	NA	NA	NA
23rd		USEPA	S92	10/24/89	68.7	261.0	95.2	0.9	1.4	61.2	NA	NA	NA
23rd		USEPA	S91	10/24/89	65.6	343.0	273.0	1.3	2.9	103.0	NA	NA	NA
24th		USEPA	S88	10/24/89	104.0	245.0	NA	NA	2.2J	85.3	42.7	6.6	ND
24th		USEPA	S89	10/24/89	79.3	397.0	323.0	1.6	2.8	117.0	NA	NA	NA
24th		USEPA	S90	10/24/89	17.4	122.0	93.9	ND	1.0	41.7	NA	NA	NA
Alton		USEPA	S73	10/5/89	32.7	162.0	NA	NA	1.8J	57.0	27.6	ND	ND
Bildahl		USEPA	S18	10/24/89	25.1	132.0	27.5	ND	ND	29.8	NA	NA	NA
Brooke		USEPA	S20	12/8/89	ND	ND	ND	ND	ND	ND	NA	NA	NA
Cannon		USEPA	S17	10/26/89	2.2	39.6	3.8	ND	ND	6.8	NA	NA	NA
Cannon		USEPA	S105	10/24/89	44.0	168.0	NA	NA	1.5J	71.2	29.5	ND	ND
Cannon		USEPA	S104	10/24/89	36.8	158.0	40.4	ND	1.1	320.0	47.8	1.3J	ND
Cannon		USEPA	S10	8/9/89	36.8	158.0	40.4	ND	1.1	320.0	47.8	1.3J	ND
Cannon		USEPA	S52	10/4/89	24.6	140.0	42.0	ND	0.8	47.9	NA	NA	NA
Cannon		USEPA	S51	10/4/89	37.0	88.3	24.1	ND	0.5	23.8	NA	NA	NA
Cannon		USEPA	S54	10/4/89	15.5	35.6	NA	NA	ND	12.4	7.7	ND	ND
Cannon		USEPA	S55	10/4/89	9.4	33.5	5.4	ND	ND	4.2	NA	NA	NA
Cannon		USEPA	S56	10/4/89	3.3	13.2	3.1	ND	ND	2.2	NA	NA	NA
Carlson		USEPA	S22	12/8/89	1.4	ND	1.9	ND	ND	ND	NA	NA	NA
Carlson		USEPA	S21	12/8/89	21.9	0.6	1.9	ND	ND	ND	NA	NA	NA
Hamilton		USEPA	S47	10/3/89	ND	2.1J	NA	NA	ND	ND	ND	ND	NA
Hanson		USEPA	S106	10/24/89	24.8	109.0	26.3	ND	ND	24.9	NA	NA	NA
Hanson		USEPA	S4	10/3/89	41.8	172.0	42.6	ND	1.9	49.1	NA	NA	NA
Hanson		USEPA	S61	10/5/89	19.1	201.0	47.5	0.6	1.0	43.8	NA	NA	NA
Hanson		USEPA	S60	10/5/89	23.9	52.8	17.6	ND	ND	17.8	NA	NA	NA
Hanson		USEPA	S59	10/5/89	28.3	75.0	20.8	ND	ND	18.8	NA	NA	NA
Hanson		USEPA	S58	10/5/89	10.6	28.3	5.3	ND	ND	4.4	NA	NA	NA
Hanson		USEPA	S3	10/3/89	6.0	18.5	3.1	ND	ND	2.7	NA	NA	NA
Hanson		USEPA	S15	10/3/89	26.4	57.4	19.7	ND	1.3	22.0	NA	NA	NA
Hanson		USEPA	S57	10/5/89	2.8	11.2	2.5	ND	ND	1.8	NA	NA	NA
Horton		USEPA	S22	10/3/89	11.4	45.4	39.6	ND	1.4	57.8	NA	NA	NA
Horton		USEPA	S21	10/3/89	40.0	197.0	50.6	0.8	2.8	42.4	NA	NA	NA
Horton		USEPA	S20	10/3/89	52.4	255.0	66.1	0.8	2.9	55.3	NA	NA	NA
Horton		USEPA	S19	10/3/89	67.8	305.0	65.5	0.7	2.4	58.8	NA	NA	NA

• ND = Not Detected, NA = Not Analyzed, J = Estimated Value

Table 3-11 cont.
USEPA VOC Data
(All concentrations in µg/l)

Address	Street No.	Sampling Agency	Sample No.	DATE 1989	TCE	1,1,1-TCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	1,1-DCA	1,1-DCE	PCE	Vinyl Chloride
Horton	2822	USEPA	S18	10/3/89	59.4	142.0	NA	NA	1.3J	47.0	28.6	2.6J	ND
Horton	[redacted]	USEPA	S16	10/3/89	25.0	60.0	19.0	ND	1.3	21.3	NA	NA	NA
Horton	[redacted]	USEPA	S17	10/3/89	44.0	147.0	40.3	ND	1.6	40.0	NA	NA	NA
Horton	[redacted]	USEPA	S101	10/24/89	22.9	75.5	19.8	ND	ND	15.6	NA	NA	NA
Johnson	[redacted]	USEPA	S48	10/4/89	ND	ND	ND	ND	ND	ND	NA	NA	NA
Kinsey	[redacted]	USEPA	S71	10/5/89	1.2	16.7	3.4	ND	ND	9.9	NA	NA	NA
Kinsey	[redacted]	USEPA	S67	10/5/89	33.4	156.0	39.7	ND	1.5	38.0	NA	NA	NA
Kinsey	[redacted]	USEPA	S11	8/9/89	31.8	NA	NA	NA	NA	213.0	27.5	0.7J	ND
Kinsey	[redacted]	USEPA	S66	10/5/89	33.7	133.0	27.7	ND	0.6	33.8	NA	NA	NA
Kinsey	[redacted]	USEPA	S65	10/5/89	17.8	62.9	11.9	ND	ND	10.9	NA	NA	NA
Kinsey	[redacted]	USEPA	S64	10/5/89	5.6	18.1	2.6	ND	ND	2.6	NA	NA	NA
Kinsey	[redacted]	USEPA	S63	10/5/89	1.9	7.3	0.9	ND	ND	0.9	NA	NA	NA
Kinsey	[redacted]	USEPA	S62	10/5/89	2.7	5.4	1.9	ND	ND	1.5	NA	NA	NA
Lapey	[redacted]	USEPA	S10	10/26/89	58.9	143.0	NA	NA	1.9J	56.6	31.0	ND	ND
Lapey	[redacted]	USEPA	S11	10/26/89	17.4	21.0	23.5	ND	ND	27.1	NA	NA	NA
Lapey	[redacted]	USEPA	S86	10/5/89	29.9	158.0	29.2	ND	0.8	32.2	NA	NA	NA
Lapey	[redacted]	USEPA	S87	10/5/89	30.0	160.0	28.4	ND	0.8	32.6	NA	NA	NA
Lapey	[redacted]	USEPA	S12	10/26/89	16.3	65.4	14.0	ND	ND	14.2	NA	NA	NA
Lapey	[redacted]	USEPA	S85	10/5/89	18.1	136.0	NA	NA	ND	1.9J	8.6	ND	ND
Lapey	[redacted]	USEPA	S74	10/5/89	13.3	47.3	7.4	ND	ND	7.0	NA	NA	NA
Lapey	[redacted]	USEPA	S76	10/5/89	3.6	14.2	2.1	ND	ND	1.9	NA	NA	NA
Lapey	[redacted]	USEPA	S77	10/5/89	2.3	7.4	0.6	ND	ND	0.7	NA	NA	NA
Lapey	[redacted]	USEPA	S79	10/5/89	1.4	4.8	ND	ND	ND	ND	NA	NA	NA
Lapey	[redacted]	USEPA	S83	10/5/89	ND	ND	ND	ND	ND	ND	NA	NA	NA
Lindale	[redacted]	USEPA	S7	10/3/89	0.9	1.3	ND	ND	ND	ND	NA	NA	NA
Lindberg	[redacted]	USEPA	S8	10/3/89	3.1	7.7	1.9	ND	ND	1.2	NA	NA	NA
Marshall	[redacted]	USEPA	S34	10/4/89	11.3	54.8	26.8	ND	1.0	39.9	NA	NA	NA
Marshall	[redacted]	USEPA	S33	10/4/89	1.1	16.0	5.6	ND	ND	17.9	NA	NA	NA
Marshall	[redacted]	USEPA	S32	10/4/89	65.6	329.0	93.0	1.1	2.5	75.3	NA	NA	NA
Marshall	[redacted]	USEPA	S31	10/4/89	62.4	310.0	74.7	0.8	2.0	61.2	NA	NA	NA
Marshall	[redacted]	USEPA	S30	10/4/89	39.4	156.0	40.2	ND	1.4	40.8	NA	NA	NA
Marshall	[redacted]	USEPA	S29	10/4/89	38.3	113.0	31.5	ND	0.9	26.0	NA	NA	NA
Marshall	[redacted]	USEPA	S103	10/24/89	19.1	44.4	14.4	ND	ND	12.5	NA	NA	NA
Marshall	[redacted]	USEPA	S28	10/4/89	10.5	30.3	6.8	ND	ND	5.0	NA	NA	NA
Marshall	[redacted]	USEPA	S27	10/4/89	10.6	13.5	7.6	ND	1.3	12.5	NA	NA	NA
Marshall	[redacted]	USEPA	S26	10/4/89	5.9	3.1	3.8	ND	2.0	9.1	NA	NA	NA
Marshall	[redacted]	USEPA	S25	10/4/89	1.4	2.6	ND	ND	ND	ND	NA	NA	NA
Marshall	[redacted]	USEPA	S24	10/4/89	1.8	3.2	ND	ND	ND	ND	NA	NA	NA
New Milford	[redacted]	USEPA	S25	12/8/89	21.7	37.2	0.7	ND	ND	0.9	NA	NA	NA
Potter	[redacted]	USEPA	S45	10/4/89	ND	ND	ND	ND	ND	ND	NA	NA	NA
Ranger	[redacted]	USEPA	S24	12/8/89	17.5	41.3	12.9	ND	1.9	16.3	NA	NA	NA
Sandy Hlw	[redacted]	USEPA	S84	10/5/89	ND	ND	ND	ND	ND	ND	NA	NA	NA
Sewell	[redacted]	USEPA	S1	10/3/89	1.5	15.6	4.7	ND	ND	14.7	NA	NA	NA
Sewell	[redacted]	USEPA	S44	10/4/89	2.9	27.5	11.5	ND	ND	29.9	NA	NA	NA
Sewell	[redacted]	USEPA	S43	10/4/89	0.5	5.8	0.6	ND	ND	0.8	NA	NA	NA
Sewell	[redacted]	USEPA	S41	10/4/89	40.5	222.0	NA	NA	1.6J	47.3	26.0	2.3J	ND
Sewell	[redacted]	USEPA	S42	10/4/89	38.8	227.0	41.4	ND	1.7	44.0	NA	NA	NA
Sewell	[redacted]	USEPA	S40	10/4/89	24.2	106.0	35.3	ND	1.1	36.7	NA	NA	NA
Sewell	[redacted]	USEPA	S2	10/3/89	18.6	49.5	14.1	ND	ND	11.8	NA	NA	NA
Sewell	[redacted]	USEPA	S39	10/4/89	9.5	26.4	5.9	ND	ND	4.1	NA	NA	NA
Sewell	[redacted]	USEPA	S38	10/4/89	2.6	9.0	2.1	ND	ND	1.4	NA	NA	NA
Sewell	[redacted]	USEPA	S37	10/4/89	ND	ND	ND	ND	ND	ND	NA	NA	NA
Sewell	[redacted]	USEPA	S36	10/4/89	ND	ND	ND	ND	ND	ND	NA	NA	NA

• ND = Not Detected, NA = Not Analyzed, J = Estimated Value

Table 3-12
IDPH VOC Data

(All concentrations in µg/l)

Address	Street No.	Sampling Agency	DATE	TCE	1,1,1-TCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	1,1-DCA	1,1-DCE	PCE	Vinyl Chloride
7th	[redacted]	IDPH	12/4/89	0.6	1.7	ND	ND	ND	ND	ND	0.2	ND
7th		IDPH	12/4/89	0.9	2.9	ND	ND	ND	ND	ND	3.3	ND
7th		IDPH	12/4/89	0.2	1.2	ND	ND	ND	ND	ND	0.9	ND
7th		IDPH	12/4/89	ND	0.4	ND	ND	ND	ND	ND	0.7	ND
7th		IDPH	12/8/89	0.9	2.0	ND	ND	ND	ND	ND	Trace	ND
8th		IDPH	12/8/89	5.6	ND	ND	Trace	22.5	Trace	2.8	Trace	ND
8th		IDPH	9/19/89	1.0	9.3	ND	ND	ND	ND	ND	ND	ND
8th		IDPH	12/5/89	2.6	2.9	ND	ND	ND	Trace	ND	Trace	ND
8th		IDPH	9/19/89	2.0	8.5	ND	ND	ND	ND	ND	ND	ND
8th		IDPH	8/9/88	2.8	4.8	ND	ND	ND	ND	0.1	14.0	ND
8th		IDPH	12/12/89	ND	ND	ND	ND	1.3	ND	ND	ND	ND
9th		IDPH	9/19/89	44.2	217.0	ND	ND	ND	24.2	1.3	ND	ND
9th		IDPH	10/25/89	3.2	7.9	ND	ND	ND	ND	0.6	<1	ND
9th		IDPH	12/8/89	ND	ND	ND	ND	0.6	ND	ND	Trace	ND
9th		IDPH	11/7/89	1.7	3.0	ND	ND	ND	ND	ND	ND	ND
9th		IDPH	11/7/89	2.0	3.0	ND	ND	ND	ND	ND	0.4	ND
9th		IDPH	12/14/89	1.5	ND	ND	ND	2.4	ND	ND	Trace	ND
9th		IDPH	12/4/89	1.4	ND	ND	ND	3.9	ND	ND	1.0	ND
9th		IDPH	12/5/89	1.7	2.6	ND	ND	ND	Trace	ND	Trace	ND
9th		IDPH	12/12/89	ND	ND	ND	ND	1.7	ND	ND	Trace	ND
9th		IDPH	12/5/89	0.6	1.8	ND	ND	ND	ND	ND	Trace	ND
9th		IDPH	12/12/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
9th		IDPH	12/12/89	ND	ND	ND	ND	ND	ND	ND	Trace	ND
10th		IDPH	12/4/89	ND	2.8	ND	ND	ND	ND	ND	ND	ND
10th		IDPH	12/4/89	2.1	2.8	ND	ND	ND	ND	ND	1.5	ND
10th		IDPH	12/5/89	2.1	3.4	ND	ND	ND	Trace	Trace	Trace	ND
10th		IDPH	12/12/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
10th		IDPH	12/12/89	1.5	2.6	ND	ND	ND	Trace	Trace	Trace	ND
10th		IDPH	8/9/88	ND	1.7	ND	ND	ND	ND	ND	0.7	ND
10th		IDPH	12/12/89	0.9	1.7	ND	ND	ND	Trace	ND	Trace	ND
10th		IDPH	12/5/89	0.6	1.6	ND	ND	ND	ND	ND	Trace	ND
11th		IDPH	9/12/89	65.7	352.6	ND	11.6	ND	40.6	50.4	1.6	ND
11th		IDPH	12/12/89	1.6	5.9	ND	Trace	0.5	Trace	2.5	Trace	ND
11th		IDPH	12/12/89	55.4	152.8	ND	Trace	1.6	Trace	30.0	Trace	ND
11th		IDPH	12/12/89	57.7	158.8	ND	Trace	1.6	Trace	30.0	Trace	ND
11th		IDPH	8/9/88	ND	ND	ND	ND	ND	ND	ND	ND	ND
11th		IDPH	12/12/89	18.6	41.7	ND	ND	0.5	Trace	ND	Trace	ND
11th		IDPH	12/12/89	17.0	37.0	ND	Trace	ND	Trace	4.8	Trace	ND
11th		IDPH	12/12/89	14.8	29.8	ND	Trace	ND	Trace	3.6	Trace	ND
11th		IDPH	12/12/89	9.3	23.9	ND	ND	Trace	Trace	Trace	Trace	ND
11th		IDPH	12/12/89	4.4	10.5	ND	Trace	ND	Trace	1.0	Trace	ND
11th		IDPH	12/12/89	3.6	9.7	ND	Trace	ND	Trace	1.0	ND	ND
11th		IDPH	12/12/89	2.1	3.2	ND	ND	ND	Trace	ND	Trace	ND
16th		IDPH	11/28/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
17th		IDPH	12/5/89	5.0	21.8	ND	Trace	ND	Trace	2.4	Trace	ND
17th		IDPH	11/6/89	1.0	1.9	ND	ND	ND	ND	ND	Trace	ND
17th		IDPH	8/21/89	1.5	2.7	ND	ND	ND	ND	0.3	ND	ND
17th		IDPH	11/6/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
18th		IDPH	10/25/89	1.0	29.4	ND	ND	ND	1.8	1.8	<1	ND
18th		IDPH	10/25/89	1.3	38.9	ND	ND	ND	3.2	ND	<1	ND
18th		IDPH	10/25/89	ND	<1	ND	ND	ND	ND	ND	ND	ND
18th		IDPH	10/25/89	<1	ND	ND	ND	ND	1.8	ND	ND	ND
18th		IDPH	11/7/89	17.8	49.4	ND	ND	ND	11.0	4.7	4.5	ND
18th		IDPH	11/6/89	2.7	8.8	ND	ND	ND	Tracc	Trace	Trace	ND
18th		IDPH	12/11/89	ND	2.2	ND	ND	ND	ND	ND	ND	ND
18th		IDPH	11/28/89	0.7	1.3	ND	ND	ND	ND	ND	ND	ND
18th		IDPH	8/21/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
19th		IDPH	9/19/89	45.3	192.4	ND	ND	ND	13.7	1.3	ND	ND

• ND = Not Detected

Table 3-12 cont.
IDPH VOC Data

(All concentrations in µg/l)

Address	Street No.	Sampling Agency	DATE	TCE	1,1,1-TCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	1,1-DCA	1,1-DCE	PCE	Vinyl Chloride	
19th	[redacted]	IDPH	11/28/89	2.0	4.5	ND	ND	ND	ND	ND	0.6	ND	
19th		IDPH	11/28/89	ND	ND	ND	ND	ND	ND	ND	ND	ND	
19th		IDPH	11/28/89	ND	ND	ND	ND	ND	ND	ND	ND	ND	
19th		IDPH	11/6/89	1.4	2.5	ND	ND	ND	ND	ND	Trace	ND	
19th		IDPH	11/28/89	0.5	ND	ND	ND	ND	ND	ND	ND	ND	
19th		IDPH	11/28/89	ND	ND	ND	ND	ND	ND	ND	ND	ND	
19th		IDPH	8/21/89	ND	ND	ND	ND	ND	ND	ND	ND	ND	
20th		IDPH	9/26/89	121.7	57.5	ND	ND	ND	46.8	<1	15.1	ND	
20th		IDPH	9/26/89	112.5	436.0	ND	ND	ND	19.5	4.0	1.9	ND	573.9
20th		IDPH	9/26/89	44.0	204.8	ND	ND	ND	19.2	2.2	6.5	ND	
20th		IDPH	9/26/89	8.2	83.1	ND	ND	ND	3.1	<1	3.8	ND	
20th		IDPH	9/26/89	21.5	164.8	ND	ND	ND	8.0	1.4	1.5	ND	
20th		IDPH	11/28/89	0.9	0.6	ND	ND	ND	ND	ND	ND	ND	
20th		IDPH	11/6/89	4.1	18.0	ND	ND	0.4	2.4	ND	2.1	ND	
20th		IDPH	11/28/89	4.3	15.4	ND	ND	ND	2.8	ND	1.8	ND	
20th		IDPH	12/4/89	2.9	2.3	ND	ND	ND	ND	ND	ND	ND	
20th		IDPH	8/21/89	ND	ND	ND	ND	ND	ND	ND	ND	ND	
21st		IDPH	9/26/89	31.4	89.3	ND	ND	ND	2.3	1.3	6.8	ND	
21st		IDPH	9/26/89	19.9	95.3	ND	ND	ND	6.7	<1	5.8	ND	
23rd		IDPH	9/26/89	97.1	436.0	ND	ND	ND	34.4	3.1	4.3	ND	574.9
23rd		IDPH	9/26/89	9.0	68.1	ND	ND	ND	5.5	<1	ND	ND	
23rd		IDPH	10/17/89	4.7	32.4	ND	ND	ND	14.8	4.7	ND	ND	
23rd		IDPH	9/26/89	7.0	82.2	ND	ND	ND	6.0	<1	ND	ND	
23rd		IDPH	11/7/89	ND	ND	ND	ND	ND	ND	ND	Trace	ND	
Alton		IDPH	10/25/89	2.7	20.4	ND	ND	ND	6.4	0.7	1.3	ND	
Bildahl		IDPH	12/4/89	0.3	ND	ND	ND	ND	ND	ND	ND	ND	
Bildahl		IDPH	12/4/89	1.3	1.3	ND	ND	ND	ND	ND	ND	ND	
Bildahl		IDPH	12/4/89	0.8	1.0	ND	ND	ND	0.5	ND	ND	ND	
Bildahl		IDPH	1/10/89	2.0	2.5	ND	ND	ND	ND	ND	<1	ND	
Bildahl		IDPH	12/12/89	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Bildahl		IDPH	12/12/89	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Brooke		IDPH	12/5/89	0.5	1.9	ND	ND	ND	Trace	ND	Trace	ND	
Brooke		IDPH	12/5/89	0.8	2.6	ND	ND	ND	ND	ND	ND	ND	
Brooke		IDPH	12/4/89	1.0	3.2	ND	ND	ND	ND	ND	ND	ND	
Cannon		IDPH	8/9/88	140.0	140.0	ND	ND	ND	13.0	2.0	4.8	ND	
Cannon		IDPH	10/17/89	30.5	97.5	ND	ND	ND	28.5	11.4	1.1	ND	
Cannon		IDPH	9/12/89	52.7	200.0	ND	ND	9.0	39.2	51.1	6.6	ND	
Cannon		IDPH	9/12/89	60.6	283.2	ND	ND	7.2	36.9	41.8	5.3	ND	
Cannon		IDPH	9/12/89	20.7	83.5	ND	ND	ND	24.0	24.7	0.8	ND	
Cannon		IDPH	8/21/89	31.0	177.0	23.0	ND	1.8	34.0	25.0	1.2	ND	
Cannon		IDPH	10/17/89	47.1	89.1	ND	ND	ND	16.3	9.4	0.7	ND	
Cannon		IDPH	9/8/88	40.0	86.0	ND	ND	ND	11.0	1.2	0.9	ND	
Cannon		IDPH	9/8/88	6.4	56.0	ND	ND	ND	2.0	1.4	0.2	ND	
Cannon		IDPH	10/17/89	14.3	49.4	ND	ND	ND	5.8	3.4	0.5	ND	
Cannon		IDPH	11/7/89	16.2	38.8	ND	ND	ND	4.8	ND	ND	ND	
Cannon		IDPH	11/28/89	6.3	14.7	ND	ND	ND	1.5	ND	ND	ND	
Collins		IDPH	12/4/89	2.8	4.7	ND	ND	ND	ND	ND	4.8	ND	
Collins		IDPH	12/4/89	1.1	3.7	ND	ND	ND	ND	ND	6.5	ND	
Collins		IDPH	12/4/89	0.4	1.3	ND	ND	ND	ND	ND	1.5	ND	
Collins		IDPH	12/4/89	0.6	ND	ND	ND	ND	ND	ND	0.8	ND	
Collins		IDPH	12/5/89	0.9	2.2	ND	ND	ND	Trace	ND	Trace	ND	
Collins		IDPH	12/12/89	1.1	2.7	ND	Trace	ND	ND	ND	Trace	ND	
Hamilton		IDPH	11/6/89	0.6	1.6	ND	ND	ND	ND	ND	Trace	ND	
Hamilton		IDPH	11/6/89	1.0	1.8	ND	ND	ND	ND	ND	Trace	ND	
Hanson		IDPH	9/12/89	2.7	13.9	ND	ND	ND	ND	14.0	0.9	ND	
Hanson		IDPH	10/17/89	28.3	141.0	ND	ND	ND	65.4	17.2	0.3	ND	
Hanson		IDPH	9/12/89	68.5	287.5	ND	ND	8.4	39.6	48.0	3.3	ND	
Hanson		IDPH	9/13/88	68.0	98.0	ND	ND	ND	25.0	3.8	3.2	ND	

• ND = Not Detected

Table 3-12 cont.
IDPH VOC Data

(All concentrations in µg/l)

Address	Street No.	Sampling Agency	DATE	TCE	1,1,1-TCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	1,1-DCA	1,1-DCE	PCE	Vinyl Chloride
Hanson	[redacted]	IDPH	6/20/89	73.4	204.0	ND	ND	0.9	ND	52.2	3.3	ND
Hanson		IDPH	9/12/89	40.0	200.0	ND	ND	ND	28.2	32.3	1.6	ND
Hanson		IDPH	9/19/89	29.6	105.8	ND	ND	ND	10.2	0.7	ND	ND
Hanson		IDPH	9/19/89	32.6	101.0	ND	ND	ND	10.9	2.9	ND	ND
Hanson		IDPH	9/26/89	20.3	49.3	ND	ND	ND	5.4	<1	<1	ND
Hanson		IDPH	9/26/89	27.5	97.6	ND	ND	ND	9.0	1.0	1.0	ND
Hanson		IDPH	1/10/89	23.0	31.0	ND	1.0	ND	ND	ND	ND	ND
Hanson		IDPH	10/17/89	14.3	49.7	ND	ND	ND	5.8	3.7	0.4	ND
Hanson		IDPH	10/17/89	13.3	32.1	ND	ND	ND	4.7	2.7	0.4	ND
Hanson		IDPH	11/6/89	6.2	16.7	ND	ND	ND	1.8	ND	ND	ND
Hanson		IDPH	10/17/89	14.8	13.4	ND	ND	ND	14.4	6.1	0.2	ND
Harrison		IDPH	12/12/89	ND	12.3	ND	ND	ND	ND	0.7	Trace	ND
Horton		IDPH	10/17/89	1.7	16.0	ND	ND	ND	28.3	3.6	0.5	ND
Horton		IDPH	9/12/89	2.7	78.6	ND	ND	5.6	22.8	24.8	ND	ND
Horton		IDPH	9/19/89	92.8	411.6	ND	ND	ND	36.5	2.4	ND	ND 543
Horton		IDPH	9/12/89	68.1	100.0	ND	ND	11.6	48.1	60.2	8.6	ND
Horton		IDPH	9/12/89	75.8	434.3	108.4	ND	13.2	50.5	63.4	4.3	ND 749.9
Horton		IDPH	9/12/89	64.3	400.0	ND	ND	13.6	50.6	62.6	2.6	ND
Horton		IDPH	9/19/89	43.1	218.4	ND	ND	ND	23.9	1.5	ND	ND
Horton		IDPH	10/17/89	47.6	249.0	ND	ND	ND	62.3	26.2	3.8	ND
Horton		IDPH	9/12/89	57.6	205.1	ND	ND	7.4	35.6	29.5	3.2	ND
Horton		IDPH	9/19/89	54.1	228.0	ND	ND	ND	27.5	2.8	ND	ND
Horton		IDPH	9/19/89	26.9	197.3	ND	ND	ND	13.3	1.0	ND	ND
Horton		IDPH	9/19/89	51.9	218.8	ND	ND	ND	22.2	1.3	ND	ND
Horton		IDPH	10/17/89	51.6	133.0	ND	ND	ND	44.8	9.4	1.2	ND
Horton		IDPH	8/8/88	51.0	110.0	ND	ND	ND	11.0	1.3	2.0	ND
Horton		IDPH	10/25/89	8.5	26.5	ND	ND	ND	ND	3.2	<1	ND
Horton		IDPH	8/9/88	12.0	23.0	ND	ND	ND	9.1	1.1	2.7	ND
Horton		IDPH	10/17/89	12.6	13.7	ND	ND	ND	7.5	4.2	0.4	ND
Horton		IDPH	11/28/89	8.7	30.1	ND	ND	ND	4.4	ND	1.8	ND
Horton		IDPH	8/9/88	2.7	1.8	ND	ND	1.7	ND	ND	2.6	ND
Horton		IDPH	11/28/89	0.9	1.1	ND	ND	ND	ND	ND	ND	ND
Horton		IDPH	11/7/89	1.5	2.6	ND	ND	ND	ND	ND	ND	ND
Johnson		IDPH	12/5/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Johnson		IDPH	12/4/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Johnson		IDPH	12/11/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Johnson		IDPH	12/5/89	ND	ND	ND	ND	ND	ND	ND	Trace	ND
Johnson		IDPH	12/11/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Johnson		IDPH	12/11/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Johnson		IDPH	12/11/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Johnson		IDPH	12/11/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Johnson		IDPH	12/5/89	ND	ND	ND	ND	ND	ND	ND	Trace	ND
Kinsey		IDPH	6/20/89	63.8	161.0	ND	ND	1.0	ND	53.9	1.8	ND
Kinsey		IDPH	9/12/89	24.1	219.0	ND	ND	5.2	30.9	34.3	1.5	ND
Kinsey		IDPH	10/17/89	50.8	197.0	ND	ND	ND	50.2	23.5	1.3	ND
Kinsey		IDPH	9/19/89	20.4	193.2	ND	ND	ND	15.1	0.9	ND	ND
Kinsey		IDPH	9/19/89	28.2	182.6	ND	ND	ND	13.8	0.8	ND	ND
Kinsey		IDPH	10/25/89	58.9	193.8	ND	ND	ND	ND	51.9	3.5	ND
Kinsey		IDPH	10/17/89	15.1	94.3	ND	ND	ND	14.7	8.3	0.2	ND
Kinsey		IDPH	1/10/89	35.0	37.0	ND	3.0	ND	ND	ND	ND	ND
Kinsey		IDPH	9/19/89	20.9	81.0	ND	ND	ND	12.6	0.8	ND	ND
Kinsey		IDPH	6/20/89	7.0	13.9	ND	ND	0.2	ND	3.5	0.2	ND
Kinsey		IDPH	10/17/89	7.5	29.1	ND	ND	ND	3.9	2.3	0.2	ND
Kinsey		IDPH	12/4/89	5.0	11.4	2.9	ND	ND	2.1	ND	ND	ND
Kinsey		IDPH	11/7/89	2.8	10.6	ND	ND	ND	ND	0.9	ND	ND
Lapey		IDPH	9/26/89	50.0	224.2	ND	ND	ND	25.2	2.7	4.1	ND
Lapey		IDPH	9/12/89	21.0	114.2	ND	ND	2.9	17.5	23.6	ND	ND
Lapey		IDPH	9/19/89	17.5	50.6	ND	ND	ND	6.5	0.5	ND	ND

• ND = Not Detected

Table 3-12 cont.
IDPH VOC Data

(All concentrations in µg/l)

Address	Street No.	Sampling Agency	DATE	TCE	1,1,1-TCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	1,1-DCA	1,1-DCE	PCE	Vinyl Chloride
Lapey	[redacted]	IDPH	9/26/89	<1	1.5	ND	ND	ND	ND	ND	ND	ND
Lapey		IDPH	12/12/89	1.7	3.0	ND	ND	ND	Trace	ND	Trace	ND
Lapey		IDPH	1/7/89	1.3	3.0	ND	ND	ND	ND	ND	ND	ND
Lapey		IDPH	11/7/89	1.8	2.7	ND	ND	ND	ND	ND	ND	ND
Lapey		IDPH	11/7/89	1.9	2.7	ND	ND	ND	ND	ND	ND	ND
Lapey		IDPH	11/7/89	2.1	3.8	ND	ND	ND	ND	ND	ND	ND
Lapey		IDPH	11/7/89	2.0	4.5	ND	ND	ND	ND	ND	ND	ND
Lapey		IDPH	12/12/89	1.6	2.7	ND	ND	ND	ND	ND	Trace	ND
Lapey		IDPH	12/12/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lapey		IDPH	12/4/89	ND	0.7	ND	ND	ND	ND	ND	ND	ND
Lindale		IDPH	6/20/89	0.7	1.5	ND	ND	ND	ND	ND	0.3	ND
Lindale		IDPH	6/20/89	1.3	2.2	ND	ND	ND	ND	ND	1.0	ND
Lindale		IDPH	11/6/89	1.3	1.7	ND	ND	ND	ND	ND	Trace	ND
Lindberg		IDPH	11/28/89	0.6	ND	ND	ND	ND	ND	ND	ND	ND
Lindberg		IDPH	11/6/89	1.6	0.6	ND	ND	ND	Trace	ND	Trace	ND
Lindberg		IDPH	8/9/88	1.1	2.1	ND	ND	ND	ND	ND	ND	ND
Lindberg		IDPH	8/9/88	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Lindberg		IDPH	11/28/89	1.4	0.8	ND	ND	ND	ND	ND	ND	ND
Lindberg		IDPH	1/28/89	2.9	6.0	ND	ND	ND	ND	ND	0.8	ND
Lindberg		IDPH	12/5/89	2.9	5.5	ND	Trace	ND	Trace	0.8	Trace	ND
Lindberg		IDPH	11/6/89	2.2	3.7	ND	ND	ND	ND	0.6	Trace	ND
Lindberg		IDPH	11/6/89	4.2	11.2	ND	ND	ND	ND	1.2	Trace	ND
Lindberg		IDPH	8/9/88	6.1	16.0	ND	ND	ND	1.0	0.4	2.9	ND
Lyran		IDPH	12/11/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lyran		IDPH	12/11/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lyran		IDPH	12/11/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lyran		IDPH	12/5/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Marshall		IDPH	11/7/89	7.7	157.0	ND	ND	ND	13.4	ND	1.4	ND
Marshall		IDPH	12/4/89	1.8	18.1	13.5	ND	ND	31.6	4.6	ND	ND
Marshall		IDPH	9/12/89	4.1	54.0	ND	ND	ND	12.4	13.3	<1	ND
Marshall		IDPH	12/4/89	23.7	108.0	64.5	ND	ND	77.9	28.6	ND	ND
Marshall		IDPH	11/28/89	37.5	170.5	50.6	ND	ND	80.9	19.2	ND	ND
Marshall		IDPH	11/28/89	ND	1.8	ND	ND	ND	ND	ND	0.5	ND
Marshall		IDPH	10/17/89	82.9	295.0	ND	ND	ND	67.6	30.0	3.9	ND
Marshall		IDPH	8/21/89	35.0	154.0	26.0	ND	3.1	34.0	38.0	1.7	ND
Marshall		IDPH	12/12/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Marshall		IDPH	9/19/89	58.2	246.0	ND	ND	ND	30.0	1.6	ND	ND
Marshall		IDPH	9/19/89	40.1	208.4	ND	ND	ND	18.7	1.1	ND	ND
Marshall		IDPH	8/21/89	44.0	187.0	27.0	1.1	2.9	39.0	36.0	ND	ND
Marshall		IDPH	10/17/89	47.9	93.6	ND	ND	ND	26.9	11.9	0.9	ND
Marshall		IDPH	9/19/89	32.6	98.1	ND	ND	ND	8.8	1.2	ND	ND
Marshall		IDPH	2/7/89	57.0	24.0	ND	2.0	ND	ND	ND	ND	ND
Marshall		IDPH	10/17/89	5.2	7.0	ND	ND	ND	6.5	2.3	ND	ND
Marshall		IDPH	10/17/89	5.0	13.8	ND	ND	ND	1.8	1.1	0.2	ND
Marshall		IDPH	10/25/89	4.0	13.1	ND	ND	ND	3.1	1.4	1.6	ND
Marshall		IDPH	10/25/89	2.3	0.5	ND	ND	ND	3.7	0.1	ND	ND
Marshall		IDPH	2/7/89	2.0	<1	ND	ND	ND	ND	ND	ND	ND
Marshall		IDPH	12/12/89	1.7	2.6	ND	ND	ND	ND	ND	Trace	ND
Pershing		IDPH	11/6/89	2.1	4.1	ND	ND	ND	ND	ND	ND	ND
Pershing		IDPH	12/14/89	2.4	ND	ND	Trace	1.2	Trace	1.3	ND	ND
Potter		IDPH	9/12/89	23.4	111.8	ND	6.7	ND	25.2	32.2	2.2	ND
Potter		IDPH	9/19/89	40.8	192.5	ND	ND	ND	15.8	0.9	ND	ND
Potter		IDPH	10/25/89	27.5	93.1	ND	ND	ND	10.2	9.1	<1	ND
Potter		IDPH	8/21/89	24.0	113.0	18.0	ND	1.4	25.0	20.0	1.2	ND
Potter		IDPH	11/28/89	12.0	29.8	ND	ND	0.3	2.9	ND	0.6	ND
Reed		IDPH	10/25/89	35.0	92.1	ND	ND	ND	14.4	8.5	0.5	ND
Reed		IDPH	10/25/89	46.6	93.0	ND	ND	ND	46.3	12.8	1.5	ND
Sandy Hlw		IDPH	12/5/89	ND	ND	ND	ND	ND	Trace	ND	ND	ND

• ND = Not Detected

Table 3-12 cont.
IDPH VOC Data

(All concentrations in µg/l)

Address	Street No.	Sampling Agency	DATE	TCE	1,1,1-TCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	1,1-DCA	1,1-DCE	PCE	Vinyl Chloride
Sandy Hlw	[redacted]	IDPH	12/5/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sandy Hlw		IDPH	12/5/89	ND	ND	ND	ND	ND	ND	ND	Trace	ND
Sandy Hlw		IDPH	12/14/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sewell		IDPH	10/25/89	1.8	ND	ND	ND	15.6	27.2	3.2	0.6	ND
Sewell		IDPH	8/9/88	0.5	3.2	ND	ND	ND	0.2	ND	ND	ND
Sewell		IDPH	9/12/89	73.7	90.0	ND	ND	9.1	55.6	51.0	5.0	ND
Sewell		IDPH	9/12/89	73.2	210.0	ND	2.2	9.2	54.2	49.0	6.7	ND
Sewell		IDPH	9/19/89	47.9	215.0	ND	ND	ND	18.8	1.1	ND	ND
Sewell		IDPH	6/20/89	21.8	38.9	ND	ND	ND	ND	10.9	0.3	ND
Sewell		IDPH	9/26/89	25.1	88.9	ND	ND	ND	6.7	ND	1.1	ND
Sewell		IDPH	2/7/89	22.0	36.0	ND	2.0	ND	ND	ND	1.0	ND
Sewell		IDPH	9/26/89	28.1	38.6	ND	ND	ND	4.9	<1	ND	ND
Sewell		IDPH	9/26/89	19.5	107.3	ND	ND	ND	4.4	<1	1.0	ND
Sewell		IDPH	9/26/89	19.8	111.2	ND	ND	ND	4.6	<1	1.4	ND
Sewell		IDPH	8/21/89	13.0	28.0	6.9	1.1	0.7	7.3	5.9	1.0	ND
Sewell		IDPH	12/25/89	17.8	48.0	ND	ND	ND	7.3	3.2	1.5	ND
Sewell		IDPH	10/25/89	ND	<1	ND	ND	ND	ND	ND	ND	ND
Sewell		IDPH	10/25/89	9.9	7.7	ND	ND	ND	19.0	4.4	<1	ND
Sewell		IDPH	10/25/89	3.4	8.6	ND	ND	ND	1.5	0.9	0.9	ND
Sewell		IDPH	12/4/89	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sewell		IDPH	11/7/89	2.3	3.9	ND	ND	ND	ND	ND	ND	ND
Sewell		IDPH	11/7/89	2.1	3.4	ND	ND	ND	ND	ND	<1	ND
Sewell		IDPH	11/7/89	1.8	3.0	ND	ND	ND	ND	ND	ND	ND
Wills		IDPH	9/12/89	<1	1.5	ND	ND	ND	ND	ND	<1	ND
Wills		IDPH	10/25/89	37.5	133.0	ND	ND	ND	33.6	12.8	0.9	ND
Wills		IDPH	11/7/89	73.9	220.0	ND	ND	ND	37.0	42.8	1.7	ND
Wills		IDPH	9/12/89	50.0	260.0	ND	ND	9.8	39.7	49.2	4.3	ND
Wills		IDPH	8/21/89	45.0	210.0	42.0	1.1	3.4	55.0	30.0	2.1	ND

• ND = Not Detected

conservative contouring approach was used to produce the plume contour maps in this report, meaning that the contour maps depict a worst-case scenario, showing the maximum contaminant concentration in any given area that is consistent with the data. For example, in cases where contamination of laboratory and field blanks indicated that the concentrations reported for the samples may exceed the actual concentration in the groundwater, the numerical concentrations were plotted on the maps as 'less than' (<) the reported values, but the maps were contoured as if the reported value was actually due entirely to groundwater contamination. Similarly, in some areas where isolated samples showed high concentration values separated by large distances, the isolated points were contoured to represent a single linear feature. Where multiple or duplicate samples were collected at a single location, the highest of the reported concentrations was plotted on the maps. This conservative contouring approach was followed to protect the public health by presenting the highest contaminant concentrations that are consistent with the data. However, it must be emphasized that the plume maps presented in this report are interpretations based on the set of data that is presented on the maps. The further removed a location is from a data point, the more interpretive are the contours. It should be noted that the density of data points in the area west of 8th Street is lower than that in the eastern portion of the study area; consequently, the broad features depicted in the western portion of the study area are more open to interpretation than are features in the eastern part of the study area.

3.2.2 DISTRIBUTION AND LEVELS OF VOC CONTAMINATION

Maps depicting the plume of VOC-contaminated groundwater are presented in Figures 3-4 through 3-20, which are included in the separately bound map packet that accompanies this report. In this section, the general features of the plume maps are described briefly. The reader is encouraged to refer to the maps for greater detail.

3.2.2.1 IEPA/USEPA Data

Although each plume map has its own unique aspects, many of the maps share several common features. In general, the maps depict a west-northwest trending plume with an axis of high concentration that runs approximately from 24th Street and Reed Avenue to 9th Street and Alton Avenue. West of 9th Street and Alton Avenue, the plume appears to bend to the southwest and become broader and flatter. Contaminant concentrations vary smoothly from location to location for the most part, and the plume appears to be roughly symmetrical about the axis of high concentration. Isolated hot spots, caused by 1 or 2 sample points appear at several locations in the study area, but these locations are not hot spots on each of the contaminant plume maps, indicating that these isolated locations contain a different group of contaminants than the main body of the plume. The features described above apply to the general distribution of TCE, 1,1,1-TCA, cis-1,2-DCE, 1,2-DCA, 1,1-DCA, and 1,1-DCE in the study area.

The tetrachloroethene (PCE) plume map (Figure 3-18) differs significantly from the general features described above. There appears to be a west-northwest trending linear feature in the vicinity of 24th Street and Reed Avenue as on the other VOC plume maps, but the feature does not extend as far west as the same feature on the other maps. In addition, a second linear feature trends west-southwest from the vicinity of 10th Street and Sawyer Road to the southwest corner of the study area. Samples from the west-central and northwestern portions of the study area show pervasive PCE contamination at low to intermediate levels (0 to 10 ppb). Some of the differences between the PCE plume map and the other VOC plume maps can be attributed to a significantly lower sample density for PCE than for the other VOCs, because many USEPA samples were not analyzed for PCE. However, the linear feature in the southwestern part of the study area is supported by a number of IEPA sample points, which did not show a similar feature for other contaminants. The presence of this southwestern linear feature suggests the existence of a plume of PCE contamination that is independent

of the main plume. It must be noted, however, that contaminant levels in this southwestern plume are low (<3 ppb). No Safe Drinking Water Act MCL has been established for PCE, but an MCL of 5 ppb has been proposed (USEPA, 1989).

Vinyl chloride and trans-1,2-DCE were detected at a few scattered locations across the study area, and their distribution does not appear to form a plume.

3.2.2.2 IDPH Data

The contour maps for the IDPH data show some features that are similar to those on the IEPA/USEPA contour maps. In general, for TCE, 1,1,1-TCA, and 1,1-DCA, there appears to be a plume that trends west-northwest and which extends from roughly 24th Street and Reed Avenue to approximately Alton Avenue and 9th Street. The remaining plume maps for the IDPH samples differ somewhat from the corresponding maps for the IEPA/USEPA samples. These differences can be attributed to the incompatibility of the IEPA/USEPA and IDPH data sets, as discussed in Subsection 3.1.2.

Figure 3-9 shows two local hot spots for cis-1,2-DCE that are bounded by Alton Avenue, 11th Street, Pershing Road, and Horton Street. There is no clear overall trend for trans-1,2-DCE, however there are several local areas of low-level concentration in the area bounded by Harrison Avenue, Horton Street, Brooke Road, and Lapey Street (Figure 3-11). It should be noted that the highest IDPH sample concentration for trans-1,2-DCE is less than 12 ppb, which is significantly lower than the proposed MCL of 100 ppb for this contaminant. The plume for 1,2-DCA extends from about Wills Avenue and Horton Street westward to roughly Reed Avenue and 8th Street (Figure 3-13). Figure 3-17 shows a small plume for 1,1-DCE that extends from Horton Street and Wills Avenue to Alton Avenue and 11th Street; local hot spots occur within this plume. The PCE plume extends from the east-central part of the study area to about Alton Avenue and Lapey Street

(Figure 3-19). Local hot spots occur within the plume as well as adjacent to it. In addition to the main PCE plume, there is a small linear feature in the vicinity of Sawyer Road and 8th Street. A similar linear feature is also apparent for the IEPA/USEPA samples (Figure 3-18), as noted in Subsection 3.2.2.1. None of the IDPH samples indicated vinyl chloride levels above the detection limit (Table 3-12), therefore no IDPH map of vinyl chloride distribution was prepared.

3.3 METALS CONTAMINATION

Maps illustrating the distribution of groundwater contamination by the 4 metals analyzed for in the Operable Unit are included as Figures 3-21 through 3-24 in the map packet. Metals analyzed for included arsenic, cadmium, chromium and lead. Detection limits for the analytical procedures used in the Operable Unit investigation are listed in Table 3-9. Only IEPA sample points are depicted on these maps because neither USEPA or IDPH have sampled the area for metals contamination. The analytical results for the metals analyses performed for this investigation are included as Table 3-13.

The maps for arsenic (Figure 3-21) and chromium (Figure 3-23) show only isolated points where the contaminant was detected at levels in excess of the respective detection limits. Arsenic was detected at 5 locations in the study area, which are circled on the figure. Arsenic was detected at a maximum level of 18.5 ppb, which is well below the 50 ppb MCL for arsenic. Chromium was detected at 3 locations in the study area, also circled, at a maximum level of 26.2 ppb, which is well below the 50 ppb MCL for chromium.

The maps for cadmium (Figure 3-22) and lead (Figure 3-24) illustrate that portions of the study area are contaminated at very low levels with these contaminants. Cadmium was not detected at levels greater than 1 ppb at any location in the study area. The MCL for cadmium is 10 ppb. Lead was detected in excess of its 50 ppb MCL in two locations, which are shown on Figure 3-24.

Table 3-13
IEPA Metals Data

(All concentrations in µg/l)

Address	Street No.	Sample No.	Sampling Agency	DATE	Arsenic	Cadmium	Chromium	Lead
4th	[redacted]	507	IEPA	6/11/90	ND	0.1B	ND	3.9
4th		509	IEPA	6/11/90	ND	ND	ND	1.4B
4th		518	IEPA	6/12/90	ND	ND	10.0UJ	ND
4th		570/571	IEPA	6/14/90	2.0UJ	0.1B	ND	1.0B
5th		577	IEPA	6/15/90	ND	0.2BJ	ND	ND
7th		582	IEPA	6/15/90	ND	ND	ND	ND
7th		553	IEPA	6/13/90	ND	0.4BJ	10.0UJ	38.9
7th		564	IEPA	6/14/90	2.0UJ	ND	ND	ND
8th		630	IEPA	6/18/90	2.0UJ	0.1UJ	10.0UJ	ND
8th		558	IEPA	6/14/90	2.0UJ	ND	ND	ND
8th		573	IEPA	6/14/90	ND	0.4BJ	ND	1.4B
8th		616	IEPA	6/17/90	ND	0.8J	10.0UJ	ND
8th		620	IEPA	6/18/90	ND	0.1BJ	10.0UJ	ND
8th		618	IEPA	6/17/90	ND	0.2BJ	10.0UJ	ND
8th		546	IEPA	6/13/90	2.0UJ	ND	ND	ND
8th		540	IEPA	6/13/90	18.5J	0.1B	ND	9.9J
8th		539	IEPA	6/13/90	2.0UJ	0.2B	ND	1.8BJ
8th		541	IEPA	6/13/90	2.0UJ	ND	ND	ND
9th		596	IEPA	6/14/90	ND	0.2BJ	ND	ND
9th		612	IEPA	6/18/90	ND	0.1BJ	10.0UJ	ND
9th		587	IEPA	6/15/90	ND	0.1BJ	ND	ND
9th		565	IEPA	6/14/90	2.0UJ	ND	ND	ND
10th		556/557	IEPA	6/13/90	2.0UJ	ND	ND	ND
11th		627	IEPA	6/18/90	2.0UJ	0.3BJ	10.0UJ	6.9
11th		504	IEPA	6/11/90	ND	0.1B	ND	3.5
11th		514	IEPA	6/12/90	ND	0.4B	10.0UJ	1.7B
11th		517	IEPA	6/12/90	2.0B	0.2B	10.0UJ	3.5
11th		580	IEPA	6/15/90	ND	0.1BJ	ND	ND
11th		579	IEPA	6/15/90	ND	0.1BJ	ND	ND
16th		552	IEPA	6/13/90	2.0UJ	ND	ND	ND
16th		401	IEPA	6/13/90	2.0UJ	ND	ND	ND
17th		544	IEPA	6/13/90	2.0UJ	ND	ND	ND
17th		551	IEPA	6/13/90	2.0UJ	ND	ND	2.2J
18th		561	IEPA	6/13/90	2.0UJ	ND	ND	ND
20th		621	IEPA	6/18/90	ND	0.8J	10.0UJ	2.1
20th		542	IEPA	6/18/90	2.0UJ	ND	ND	ND
Barnum		650	IEPA	6/20/90	ND	0.2BJ	ND	2.7
Barry		632	IEPA	6/18/90	2.0UJ	0.1BJ	10.0UJ	ND
Bildahl		641	IEPA	6/19/90	ND	ND	10.0UJ	1.0UJ
Bildahl		648	IEPA	6/19/90	ND	ND	ND	ND
Bildahl		592	IEPA	6/15/90	ND	0.4BJ	ND	1.9B
Bildahl		609/610	IEPA	6/16/90	ND	0.3BJ	10.0UJ	7.2J
Bildahl		594	IEPA	6/15/90	ND	0.1BJ	ND	ND
Bildahl		611	IEPA	6/16/90	ND	ND	10.0UJ	1.3B
Bildahl		598	IEPA	6/15/90	ND	ND	ND	3.8
Bildahl		599	IEPA	6/15/90	ND	0.1BJ	ND	ND
Brooke		617	IEPA	6/18/90	ND	0.3B	10.0UJ	2.7
Brooke		529	IEPA	6/12/90	2.0UJ	R	ND	ND
Brooke		519	IEPA	6/12/90	ND	0.2BJ	10.0UJ	1.8B
Brooke		526	IEPA	6/12/90	ND	ND	ND	ND
Brooke		527/528	IEPA	6/12/90	2.0BJ	ND/R	ND	ND
Brooke		639	IEPA	6/19/90	ND	ND	10.0UJ	1.0UJ
Brooke		581	IEPA	6/15/90	ND	0.8J	ND	1.8B
Brooke		584	IEPA	6/15/90	ND	0.2BJ	ND	ND
Collins		543	IEPA	6/13/90	2.0UJ	0.3B	ND	12.5J

• ND = Not Detected, UJ= Not Detected, Estimated Value, B = Blank Contamination, R = Rejected

Table 3-13 cont.
IEPA Metals Data

(All concentrations in µg/l)

Address	Street No.	Sample No.	Sampling Agency	DATE	Arsenic	Cadmium	Chromium	Lead
Collins	[redacted]	575	IEPA	6/14/90	ND	ND	ND	1.0B
Collins		605	IEPA	6/16/90	ND	0.1B	10.0UJ	1.1B
Collins		608	IEPA	6/16/90	ND	0.2BJ	10.0UJ	ND
Collins		560	IEPA	6/14/90	2.0UJ	ND	ND	1.3BJ
Collins		550	IEPA	6/13/90	2.0UJ	ND	ND	ND
Energy		576	IEPA	6/14/90	ND	0.2BJ	26.2	3.0
Grant		606	IEPA	6/16/90	ND	0.1BJ	10.0UJ	ND
Grant		615	IEPA	6/18/90	ND	0.1BJ	10.0UJ	ND
Hamilton		624	IEPA	6/18/90	ND	0.1BJ	10.0UJ	1.3B
Hamilton		502	IEPA	6/11/90	ND	ND	ND	18.8
Harrison		646/647	IEPA	6/19/90	ND	ND	ND	ND
Harrison		600	IEPA	6/15/90	ND	0.3BJ	ND	7.7
Harrison		626	IEPA	6/18/90	ND	0.6J	10.0UJ	86.3
Harrison		547/548	IEPA	6/13/90	2.3B	0.2BJ	10.0UJ	4.9J
Horton		588/589	IEPA	6/15/90	ND	0.1BJ	ND	1.5B
Johnson		503/505	IEPA	6/11/90	ND	ND	ND	ND
Kennon		649	IEPA	6/19/90	ND	0.1BJ	ND	ND
Kennon		640	IEPA	6/19/90	ND	0.1BJ	10.0UJ	1.0BJ
Kishwaukee		635	IEPA	6/19/90	2.0UJ	0.5J	10.0UJ	ND
Kishwaukee		590	IEPA	6/15/90	ND	0.3BJ	ND	1.5B
Kishwaukee		566	IEPA	6/14/90	2.0UJ	ND	ND	1.6BJ
Kishwaukee		567	IEPA	6/14/90	2.0UJ	ND	10.5	1.1BJ
Kishwaukee		631	IEPA	6/18/90	2.0UJ	0.2BJ	10.0UJ	ND
Lapey		642/643	IEPA	6/19/90	ND	ND	ND	1.0UJ
Lapey		604	IEPA	6/16/90	ND	ND	ND	ND
Lapey		603	IEPA	6/16/90	ND	0.2BJ	ND	ND
Lapey		597	IEPA	6/15/90	ND	ND	ND	1.2B
Lapey		569	IEPA	6/14/90	2.0UJ	ND	ND	ND
Lapey		572	IEPA	6/14/90	ND	0.1BJ	ND	15.0
Lindale		538	IEPA	6/13/90	2.0UJ	ND	ND	3.0J
Lindale		521	IEPA	6/12/90	ND	ND	10.0UJ	1.8B
Lindberg		522	IEPA	6/12/90	5.1	0.6J	10.0UJ	ND
Lindberg		559	IEPA	6/14/90	2.0UJ	ND	ND	ND
Lyran		510	IEPA	6/11/90	ND	ND	ND	1.6B
Lyran		512	IEPA	6/12/90	2.0	ND	10.0	1.0
Marshall		563	IEPA	6/14/90	2.0UJ	ND	10.0	1.1BJ
Marshall		583	IEPA	6/15/90	ND	0.1BJ	ND	1.6B
Martin		554	IEPA	6/13/90	2.1BJ	ND	ND	3.1J
Mattis		524	IEPA	6/12/90	ND	ND	ND	ND
New Milford		638	IEPA	6/18/90	ND	ND	10.6	1.0UJ
Olsen		520	IEPA	6/12/90	11.6	ND	10.0UJ	ND
Pershing		586	IEPA	6/15/90	ND	0.5BJ	ND	ND
Pershing		585	IEPA	6/15/90	ND	0.3BJ	ND	4.0
Ranger		506	IEPA	6/12/90	ND	ND	ND	ND
River Blvd.		516	IEPA	6/12/90	ND	ND	10.0UJ	1.1B
River Blvd.		636	IEPA	6/19/90	ND	0.1BJ	10.0UJ	1.0UJ
River Blvd.		613/614	IEPA	6/17/90	ND	ND	10.0UJ	ND
Rock River		530	IEPA	6/12/90	2.0UJ	ND	ND	ND
Roosevelt		628	IEPA	6/18/90	2.0UJ	0.7J	10.0UJ	ND
Sandy Hlw		602	IEPA	6/16/90	ND	0.2BJ	ND	ND
Sandy Hlw		625	IEPA	6/18/90	ND	0.1UJ	10.0UJ	ND
Sandy Hlw		622	IEPA	6/18/90	ND	0.5BJ	10.0UJ	2.2
Sandy Hlw		549	IEPA	6/13/90	2.6BJ	0.2B	ND	56.2J
Sandy Hlw		537	IEPA	6/13/90	2.0UJ	ND	ND	1.0BJ

• ND = Not Detected, UJ= Not Detected, Estimated Value, B = Blank Contamination, R = Rejected

Table 3-13 cont.
IEPA Metals Data

(All concentrations in µg/l)

Address	Street No.	Sample No.	Sampling Agency	DATE	Arsenic	Cadmium	Chromium	Lead
Saner	[redacted]	525	IEPA	6/12/90	ND	ND	ND	ND
Saner		634	IEPA	6/18/90	2.0UJ	0.1UJ	10.0UJ	ND
Saner		578	IEPA	6/15/90	ND	0.4BJ	ND	ND
Sawyer		536	IEPA	6/13/90	2.0UJ	ND	ND	3.1J
Sewell		644	IEPA	6/19/90	ND	ND	ND	ND
Sewell		593	IEPA	6/15/90	ND	ND	ND	ND
South		515	IEPA	6/12/90	ND	0.1B	10.0UJ	1.4B
Taft		629	IEPA	6/18/90	2.0UJ	0.1BJ	10.0UJ	1.8B

• ND = Not Detected, UJ= Not Detected, Estimated Value, B = Blank Contamination, R = Rejected

None of the plume maps for the metals analyzed for in the Operable Unit show a systematic distribution of contamination comparable to that observed for VOCs. Instead, the metals data collected in this study indicate localized contamination associated with several unrelated point sources.

3.4 COMPARISON TO ARARs

Applicable or Relevant and Appropriate Requirements (ARARs) are regulations, standards, or criteria that may apply to a site in a regulatory or enforcement action. CERCLA specifically limits the scope of state ARARs to regulations or requirements that have been promulgated and that are more stringent than corresponding federal standards. Section 121 of CERCLA, as reauthorized, requires that ARARs be identified on a site-by-site basis for NPL sites. USEPA's guidance document on ARARs, CERCLA Compliance with Other Laws Manual (USEPA, 1989), specifies that the state has the responsibility of identifying ARARs for a particular site. The State of Illinois has not yet formally identified ARARs for the Southeast Rockford study area, but it is likely that the state will name Safe Drinking Water Act Maximum Contaminant Levels (MCLs), Illinois' Proposed Groundwater Quality Criteria (35 IL Admin. Code 620), and other state water quality regulations as ARARs for the study area. These potential ARARs are presented in Table 3-14. This list is not intended to be exhaustive, but has been included to illustrate the numerical water quality criteria which may apply to the study area.

If a regulation could apply to a site but is not legally enforceable, it is termed a To Be Considered (TBC). Safe Drinking Water Act Secondary MCLs, which are based on aesthetic qualities of water and are not enforceable, are an example of a TBC. Table 3-14 also presents existing or proposed Maximum Contaminant Level Goals (MCLGs) for compounds that have existing or proposed MCLs. An MCLG is a non-enforceable health goal for substances that may have an adverse effect on the health of persons. The numerical value of an MCLG is set at a level at which no known or anticipated adverse effects on health occur.

TABLE 3-14
Potential Applicable or Relevant and Appropriate Requirements (ARARs)

	ILLINOIS ADMINISTRATIVE CODE 35			SAFE DRINKING WATER ACT			*Proposed Illinois Groundwater Quality Criteria*	
	SUBTITLE C		*SUBTITLE F*	*SECTION 14.2*				
	General Use Water Quality Standards Section 302.208 Concentration *(mg/l)†*	Public and Food Processing Water Supply Standards Section 302.304 Concentration *(mg/l)†*	Finished Water Quality Standards Section 604.202 Concentration *(mg/l)†*	Primary Drinking Water Standards 40 CFR 141 Concentration *(mg/l)†*	Proposed Primary and Secondary Drinking Water Standards *(mg/l)†*	Existing or Proposed Maximum Contaminant Level Goal (MCLG) *(mg/l)†*	General Resource Groundwater Section 620.302 *(mg/l)†*	Potable Resource Groundwater Section 620.301 *(mg/l)†*
Inorganics								
Arsenic (Total)	1.0	0.05	0.05	0.05		0*	0.2	0.05
Cadmium (Total)	0.05	0.01	0.01	0.01	0.005	0.005*	0.05	0.005
Chromium (Total)		0.05	0.05	0.05	0.10	0.10*	1.0	0.1
Lead (Total)	0.1	0.05	0.05	0.05	0.005	0	0.1	0.05
VOCs								
Trichloroethene				0.005		0	0.025	0.005
1,1,1-Trichloroethane				0.20		0.20	1.0	0.2
Cis-1,2-Dichloroethene					0.07	0.07*	0.2	0.07
Trans-1,2-Dichoroethene					0.1	0.1*	0.5	0.1
1,2-Dichloroethane				0.005		0	0.025	0.005
1,1-Dichloroethene				0.007		0.007	0.035	0.007
Tetrachlorethene					0.005	0*	0.025	0.005
Vinyl Chloride				0.002		0	0.01	0.002

† To convert mg/l (ppm) to ug/l (ppb), multiply ppm by 1,000

*** Signifies a proposed MCLG**

The State of Illinois is currently in the process of promulgating water quality standards that will apply to groundwater under 35 IL Admin. Code 620. These proposed regulations include two classes of groundwater: General Resource Groundwater and Potable Resource Groundwater. Under the proposed groundwater classification system, the groundwater withdrawn for potable use in the study area would be classified as Potable Resource Groundwater, to which Potable Resource Groundwater Quality Criteria (far right column in Table 3-14) would apply. The inclusion of the State of Illinois' Groundwater Quality standards as ARARs or TBCs will depend on the timing of the promulgation of the standards.

Safe Drinking Water Act MCLs have been established for 5 of the 9 VOCs of concern in this study, and have been proposed for 3 others. Illinois Potable Resource Groundwater Quality standards have been proposed for 8 of the VOCs of concern. Numerical values for the proposed Potable Resource standards are equal in all cases to the existing or proposed MCLs for the VOCs of concern. Review of the analytical results indicate that MCLs have been exceeded in portions of the study area for TCE, 1,1,1-TCA, 1,2-DCA, 1,1-DCE, and vinyl chloride. Proposed MCLs have been exceeded for cis-1,2-DCE and PCE. No standard was exceeded for trans-1,2-DCE. No Safe Drinking Water Act MCL, proposed MCL, or Potable Resource Standard has been established for 1,1-DCA.

The numerical values of the proposed Potable Resource Groundwater Quality criteria differ from the Safe Drinking Water Act MCLs for arsenic, cadmium, and chromium. These contaminants were detected at low levels in this investigation, and did not exceed either standard at any point in the study area. The MCL and proposed Potable Resource Standard for lead are both set at 50 ppb. This limit was exceeded at two locations in the study area.

The areas where an MCL for any contaminant has been exceeded are illustrated in Figure 3-25 (for IEPA/USEPA data) and Figure 3-26 (for IDPH data), both of which are included in the map packet. These figures show a broad, west-northwest trending band with small, outlying pockets of contamination at various locations across the study area.

3.5 3-D CONTOUR PLOTS OF IEPA/USEPA DATA

Appendix C contains 3-D contour plots of IEPA/USEPA data for the nine VOCs of concern. These plots provide succinct visual summaries of VOC concentrations across the study area and they augment the information presented on the contour maps in the map packet that accompanies this report. The 3-D plots should be used as qualitative guides to contamination in the study area, whereas the plume contour maps in the map packet provide quantitative information about groundwater contamination. It should be noted that the vertical scale is variable for each 3-D plot. Hence, direct comparisons of concentration levels for the different 3-D plots are not possible. The green dots represent sample locations at which contamination was detected.

4.0 RISK ASSESSMENT

4.1 PURPOSE AND SCOPE OF RISK ASSESSMENT

The purpose of this assessment is to assist the Illinois Environmental Protection Agency (IEPA) in identifying residences within the study area which are affected by the groundwater contamination, which have not or will not be provided with alternative water as part of the USEPA's final removal action, and for which the provision of an alternative water supply through a state-led action would be prudent. To determine whether an alternative water supply is needed, IEPA will rely primarily on the final or proposed Maximum Contaminant Levels (FMCLs and PMCLs) developed under the authority of the federal Safe Drinking Water Act. For the VOCs analyzed in this investigation, the FMCLs or PMCLs are numerically equivalent to the proposed Illinois Groundwater Quality Control (35 IL Admin. Code 620) for Class I Potable Resource Groundwater (Section 620.301). The proposed Illinois Groundwater Quality criteria are more restrictive than the MCLs for arsenic and cadmium, equivalent to the MCL for lead, and less restrictive than the MCL for chromium (Table 3-14). This risk assessment compares contaminant levels detected in residential wells to available FMCLs and to PMCLs when FMCLs are not available.

In this Risk Assessment, hazard indices are used to evaluate the carcinogenic and non-carcinogenic risks associated with mixtures of contaminants at wells at which detected levels of contamination do not exceed an MCL. The hazard indices will be used as a criterion for providing alternative water at these wells.

This assessment groups the 117 sampled wells according to the following three categories and provides summary tables with information on each category:

- wells where contamination was not detected above detection limits;
- wells where contamination was detected at levels that exceed one or more MCLs; and
- wells where contamination was detected above detection limits but below MCLs.

Hazard indices were calculated for the last category of wells where contamination was detected above detection limits but below the MCL. Hazard indices represent a summation of the ratios of the concentrations of chemicals detected in a particular well to the MCL for those chemicals. Separate hazard indices were calculated for both non-carcinogens and carcinogens. As instructed by IEPA, (1) all chemicals except for 1,2-dichloroethane, a stomach carcinogen, were grouped as either liver toxins or liver carcinogens; and (2) metals were excluded from the calculation of hazard indices so that the hazard indices represent the combined effects of the chlorinated solvents only. Results are presented as groups of wells where the chemical mixtures detected yield hazard indices of (1) greater than 1; (2) 0.75 to 1; (3) 0.5 to 0.74; (4) 0.25 to 0.49; and (5) 0 to 0.24.

The methodology used to categorize the 117 wells sampled and to calculate the hazard indices for wells where contamination was detected below MCLs is described in Section 4.2. The results and conclusions of this assessment are presented in Subsections 4.3 and 4.4.

4.2 METHODOLOGY

IEPA has defined two criteria with which to evaluate wells in the study area and to determine which of these wells should be provided with an alternative water supply. These criteria include (1) MCLs and (2) the target organ hazard indices. Hazard indices represent a sum of the ratios

of contaminant concentrations to their respective MCL for a mixture of contaminants believed to have the same target organ or mechanism of action. Separate hazard indices were calculated for both non-carcinogenic and carcinogenic substances. This methodology generally corresponds to the Guidelines for the Health Risk Assessment of Chemical Mixtures (FR Vol. 51, 34014-34025, 1986). The methodology used to prepare the information needed by IEPA involved data evaluation, comparison of data to MCLs, and the calculation of hazard indices for wells where contaminants were detected at concentrations below MCLs. Each of these steps is summarized below.

4.2.1 DATA EVALUATION

Data for 9 volatile organic compounds and four metals were received from the USEPA contract laboratories, as discussed in Subsection 2.3.2. Due to the low detection limits, a number of data points were qualified or flagged. Data qualifiers for VOCs are discussed in Subsection 3.1.

Wells at which all contaminant concentrations were qualified with either a "U" or a "J" were considered wells where contamination was not detected above detection limits. The detection limit for vinyl chloride was 0.25 ppb and the detection limit for all remaining VOCs was 0.50 ppb. Table 4-1 presents a list of these wells and Figure 4-1 identifies these wells on a study area map. Wells at which contaminant concentrations were not qualified or were qualified with a "B," were evaluated as to whether any MCLs were exceeded.

4.2.2 COMPARISON OF DATA TO MAXIMUM CONTAMINANT LEVELS

Once wells at which contamination was not detected were segregated from the data set, data for the remaining wells were compared to MCLs, which are listed in Table 3-14. MCLs are equivalent to the Illinois Potable Resource Criteria (35 Ill. Adm. Section 620.301).

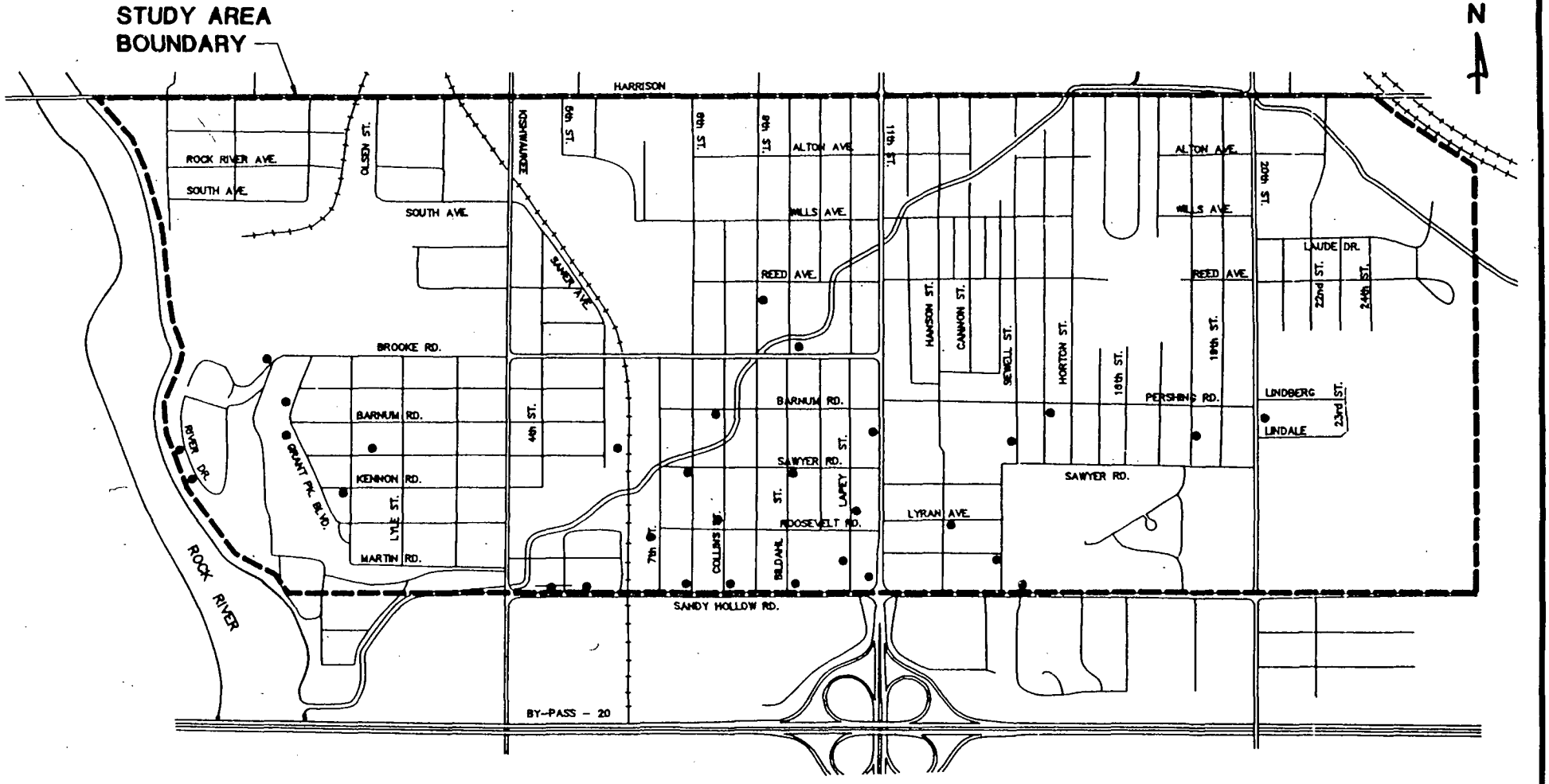
Table 4-1

S.E. ROCKFORD OPERABLE UNIT - WELLS WHERE CONTAMINATION *NOT* DETECTED ABOVE DETECTION LIMITS*

ADDRESS	ADDRESS
[redacted]	

* Detection limit of 0.5 ppb used for the following chemicals: 1,1 - DCE; Trans 1,2 - DCE; 1,1 - DCA; CIS - 1,2 - DCE; 1,1,1 - TCA; 1,2 - DCA; TCE, PCE

Detection limit of 0.25 ppb used for Vinyl Chloride



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SCALE:
0 0.5 MILES

WELLS WHERE CONTAMINATION NOT DETECTED ABOVE DETECTION LIMITS

FIGURE NO.
4-1

Contaminant concentrations for each well at which one or more MCLs was exceeded are presented in Table 4-2 and the wells are identified on a study area map in Figure 4-2.

4.2.3 CALCULATION OF HAZARD INDICES

Once wells at which contamination was not detected above detection limits and wells at which one or more MCLs were exceeded were identified, hazard indices were calculated for the contaminants or contaminant mixtures detected in the remaining wells where contamination was detected at concentrations below MCLs. Contaminant concentrations are presented for each of these wells in Table 4-3.

Hazard indices were calculated separately for non-carcinogens and carcinogens. TCE, PCE, 1,2-DCE, and vinyl chloride are carcinogens and 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE and 1,1,1-TCA are non-carcinogens (USEPA, 1990). Though analyzed, sufficient evidence does not exist to classify 1,1-DCA as either carcinogenic or non-carcinogenic. Neither an MCL nor an Illinois Potable Resource Criteria exists for 1,1-DCA. Therefore, this contaminant was not included in the calculation of the hazard indices, as instructed by IEPA. None of the VOC contaminants considered were classified as both carcinogenic and non-carcinogenic. As directed by IEPA, all contaminants, except for 1,2-DCE, a stomach carcinogen, were considered to be either liver toxins or liver carcinogens. Spreadsheets used to calculate the non-carcinogenic and carcinogenic hazard indices are included as Appendix D. Table 4-4 groups wells into incremental hazard index categories. Figures 4-3 and 4-4 included in the map packet delineate these wells on a study area map and list the associated non-carcinogenic and carcinogenic hazard indices.

4.3 RESULTS

Contamination was not detected above detection limits in 31 of the 117 wells sampled. A list of these wells is provided in Table 4-1. Wells for

Table 4-2

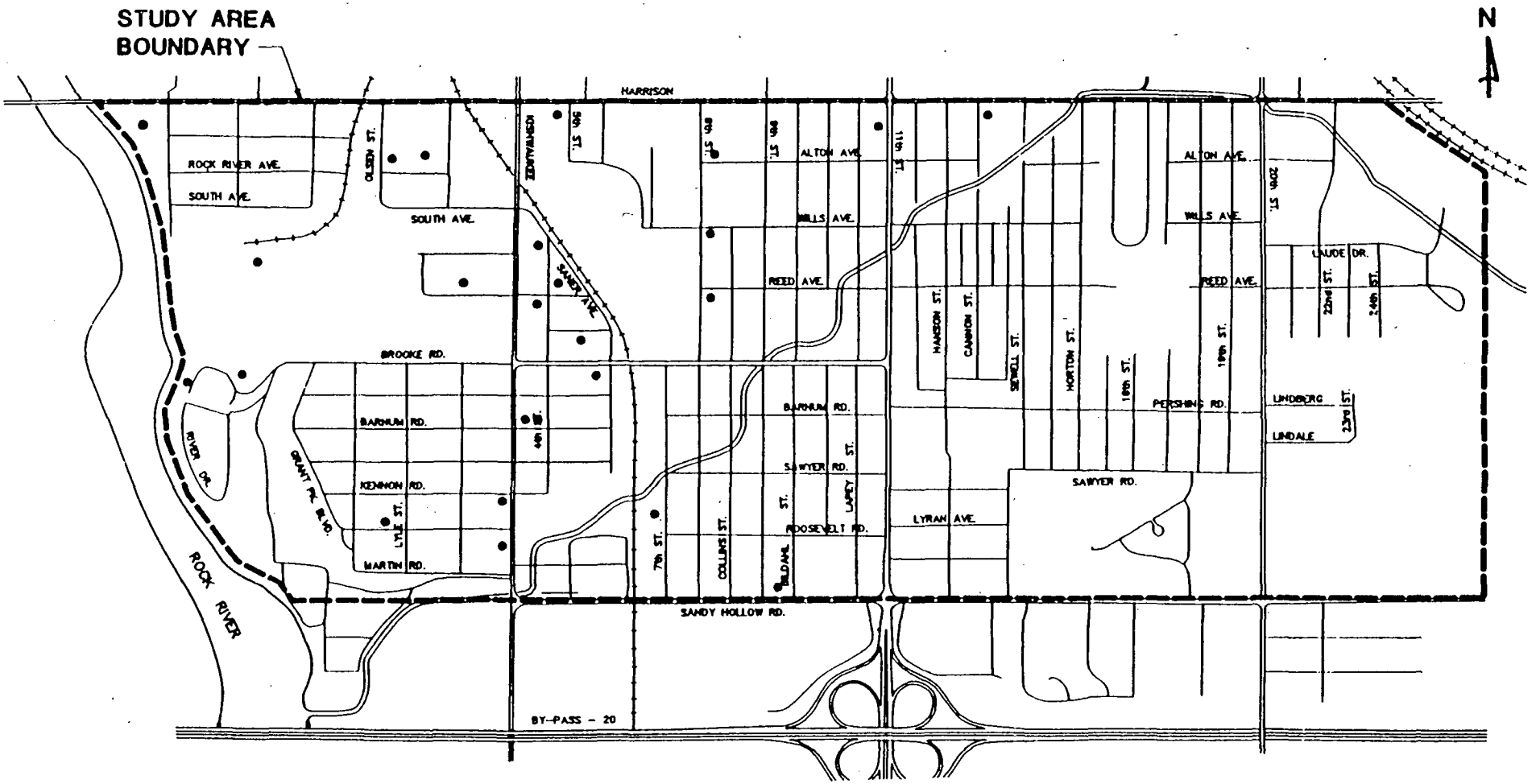
S.E. ROCKFORD OPERABLE UNIT - WELLS WHERE ONE OR MORE MAXIMUM CONTAMINANT LEVELS EXCEEDED

ADDRESS	CONTAMINANT (ug/l)	CONCENTRATION (ug/l)	MAXIMUM CONTAMINANT LEVEL (ug/l)
[redacted]	1,1 - DCE	11	7
	TCE	21	5
	1,1 - DCE	8	7
	TCE	17	5
	1,1 - DCE	9	7
	TCE	18	5
	TCE	18	5
	TCE	111	5
	1,1 - DCE	25	7
	TCE	29	5
	TCE	10	5
	PCE	127	5
	1,1 - DCE	20	7
	TCE	32	5
	TCE	15	5
	TCE	20	5
	Vinyl Chloride	114	2
	1,1 - DCE	13	7
	Cis 1,2 - DCE	1233	70
	1,2 - DCA	13	5
	TCE	171	5
	PCE	13	5
	PCE	7	5
	TCE	8	5
	TCE	36	5
	PCE	10	5
	TCE	36	5
	PCE	10	5

Table 4-2 (CONT.)

S.E. ROCKFORD OPERABLE UNIT - WELLS WHERE ONE OR MORE MAXIMUM CONTAMINANT LEVELS EXCEEDED

ADDRESS	CONTAMINANT (ug/l)	CONCENTRATION (ug/l)	MAXIMUM CONTAMINANT LEVEL (ug/l)
[redacted]	PCE	15	5
	TCE	102	5
	PCE	24	5
	TCE	126	5
	1,1 - DCE	25	7
	1,1,1 - TCA	991	200
	TCE	63	5
	Pb	56	50
	1,1 - DCE	7.9	7
	TCE	14	5
	Vinyl Chloride	9	2
	1,1 - DCE	110	7
	1,1,1 - TCA	528	200
	1,2 - DCA	6	5
	TCE	10	5
	PCE	10	5
	Cis 1,2 - DCE	99	70
	TCE	428	5
	TCE	13	5
	TCE	14	5
	TCE	7	5
	PCE	545	5
	1,1 - DCE	34	7
	TCE	41	5
	PCE	10	5
	1,1 - DCE	34	7
	TCE	41	5
	PCE	10	5
	Pb	56	50



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WELLS WHERE ONE OR MORE MAXIMUM CONTAMINANT LEVELS EXCEEDED

FIGURE NO.

4-2

Table 4-3

S.E. ROCKFORD OPERABLE UNIT - WELLS WHERE CONTAMINATION DETECTED ABOVE DETECTION LIMITS BUT BELOW MAXIMUM CONTAMINANT LEVELS

ADDRESS	CONTAMINANT (ug/l)	CONCENTRATION (ug/l)	MAXIMUM CONTAMINANT LEVEL (ug/l)
[redacted]	TCE	0.8	5
	Cis 1,2 - DCE	11.0	70
	TCE	1.0	5
	PCE	1.1	5
	1,1,1 - TCA	6.3	200
	TCE	3.3	5
	Cis 1,2 - DCE	14.0	70
	1,1,1 - TCA	1.7	200
	TCE	1.1	5
	PCE	0.9	5
	TCE	1.6	5
	1,1,1 - TCA	1.8	200
	TCE	1.7	5
	PCE	1.0	5
	1,1 - DCE	0.6	7
	1,1,1 - TCA	3.8	200
	TCE	2.4	5
	PCE	2.0	5
	TCE	0.6	5
	PCE	0.5	5
	TCE	1.0	5
	PCE	1.8	5
	TCE	1.2	5
	1,1 - DCE	1.4	7
	Cis 1,2 - DCE	2.1	70
	1,1,1 - TCA	8.6	200
	TCE	2.0	5

Table 4-3 (CONT.)

S.E. ROCKFORD OPERABLE UNIT - WELLS WHERE CONTAMINATION DETECTED ABOVE DETECTION LIMITS BUT BELOW MAXIMUM CONTAMINANT LEVELS

ADDRESS	CONTAMINANT (ug/l)	CONCENTRATION (ug/l)	MAXIMUM CONTAMINANT LEVEL (ug/l)
[redacted]	1,1 - DCE	1.0	7
	CIS 1,2 - DCE	2.5	70
	1,1,1 - TCA	29.0	200
	TCE	1.1	5
	1,1 - DCE	0.8	7
	1,1,1 - TCA	10	200
	1,1 - DCE	0.9	7
	1,1,1 - TCA	11	200
	1,1,1 - TCA	2.5	200
	TCE	0.9	5
	1,1,1 - TCA	2.8	200
	TCE	2.0	5
	1,1 - DCE	1.1	7
	CIS 1,2 - DCE	1.5	70
	1,1,1 - TCA	7.0	200
	TCE	3.1	5
	PCE	0.7	5
	CIS 1,2 - DCE	2.0	70
	TCE	4.8	5
	PCE	4.7	5
	TCE	2.9	5
	TCE	2.4	5
	1,1 - DCE	0.8	7
	CIS 1,2 - DCE	1.1	70
	TCE	3.2	5
	PCE	0.6	5
	1,1,1 - TCA	1.9	200

Table 4-3 (CONT.)

S.E. ROCKFORD OPERABLE UNIT - WELLS WHERE CONTAMINATION DETECTED ABOVE DETECTION LIMITS BUT BELOW MAXIMUM CONTAMINANT LEVELS

ADDRESS	CONTAMINANT (ug/l)	CONCENTRATION (ug/l)	MAXIMUM CONTAMINANT LEVEL (ug/l)
[redacted]	PCE	1.8	5
	1,1,1 - TCA	2.5	200
	PCE	1.2	5
	TCE	0.6	5
	CIS 1,2 - DCE	14.0	70
	TCE	2.8	5
	PCE	2.1	5
	1,1,1 - TCA	2.1	200
	TCE	0.9	5
	PCE	0.7	5
	1,1,1 - TCA	4.5	200
	TCE	1.6	5
	1,1,1 - TCA	3.0	200
	TCE	1.0	5
	PCE	1.3	5
	1,1,1 - TCA	3.4	200
	TCE	1.8	5
	CIS 1,2 - DCE	0.5	70
	1,1,1 - TCA	4.7	200
	TCE	2.3	5
	1,1,1 - TCA	4.1	200
	TCE	2.1	5
	1,1,1 - TCA	3.1	200
	TCE	1.7	5
	1,1,1 - TCA	3.2	200
	TCE	2.0	5
	PCE	2.4	5
	TCE	0.8	5
	1,1,1 - TCA	3.4	200

Table 4-3 (CONT.)

S.E. ROCKFORD OPERABLE UNIT - WELLS WHERE CONTAMINATION DETECTED ABOVE DETECTION LIMITS BUT BELOW MAXIMUM CONTAMINANT LEVELS

ADDRESS	CONTAMINANT (ug/l)	CONCENTRATION (ug/l)	MAXIMUM CONTAMINANT LEVEL (ug/l)
[redacted]	1,1,1 - TCA	2.9	200
	TCE	1.6	5
	1,1,1 - TCA	3.8	200
	TCE	2.2	5
	PCE	2.3	5
	TCE	1.4	5
	1,1 - DCE	1.5	7
	CIS 1,2 - DCE	5.8	70
	1,1,1 - TCA	33	200
	TCE	3.3	5
	PCE	0.7	5
	1,1,1 - TCA	4.0	200
	TCE	2.7	5
	1,1,1 - TCA	2.8	200
	TCE	1.8	5
	1,1,1 - TCA	2.9	200
	TCE	2.0	5
	1,1,1 - TCA	3.9	200
	TCE	2.7	5
	1,1,1 - TCA	4.1	200
	TCE	2.6	5
	1,1,1 - TCA	2.7	200
	TCE	1.9	5
	1,1,1 - TCA	3.8	200
	TCE	2.1	5
	1,1,1 - TCA	21.0	200

Table 4-3 (CONT.)

S.E. ROCKFORD OPERABLE UNIT - WELLS WHERE CONTAMINATION DETECTED ABOVE DETECTION LIMITS BUT BELOW MAXIMUM CONTAMINANT LEVELS

ADDRESS	CONTAMINANT (ug/l)	CONCENTRATION (ug/l)	MAXIMUM CONTAMINANT LEVEL (ug/l)
[redacted]	1,1,1 TCA	3.9	200
	TCE	2.5	5
	PCE	1.0	5
	1,1,1 TCA	3.3	200
	TCE	1.8	5
	1,1,1 TCA	3.0	200
	TCE	1.9	5
	1,1,1 TCA	2.4	200
	TCE	0.9	5
	PCE	2.4	5
	1,1,1 TCA	1.4	200
	PCE	1.1	5
	1,1 -DCE	0.7	7
	TCE	1.2	5
	1,1,1 TCA	2.0	200
	TCE	0.7	5
	PCE	2.8	5
	1,1,1 TCA	2.2	200
	TCE	0.7	5
	1,1,1 TCA	4.3	200
	TCE	2.2	5
	PCE	0.6	5
	1,1,1 TCA	4.2	200
	TCE	2.2	5
	1,1 - DCE	1.2	7
	1,1,1 TCA	39.0	200
	TCE	0.7	5

Table 4-3 (CONT.)

S.E. ROCKFORD OPERABLE UNIT - WELLS WHERE CONTAMINATION DETECTED ABOVE DETECTION LIMITS BUT BELOW MAXIMUM CONTAMINANT LEVELS

ADDRESS	CONTAMINANT (ug/l)	CONCENTRATION (ug/l)	MAXIMUM CONTAMINANT LEVEL (ug/l)
[redacted]	CIS 1,2 - DCE	0.1	7
	1,2 - DCA	1.6	5
	TCE	0.5	5
	1,1,1 - TCA	2.9	200
	TCE	1.3	5
	1,1 - DCA	1.1*	NA

*GROUNDWATER QUALITY CRITERIA NOT AVAILABLE FOR THIS CHEMICAL

Table 4-4

S.E. ROCKFORD OPERABLE UNIT - INCREMENTAL TARGET ORGAN HAZARD INDICES FOR WELLS WHERE CONTAMINATION DETECTED *BELOW* MAXIMUM CONTAMINANT LEVELS

ADDRESS	HAZARD INDEX	CARCINOGENIC TARGET ORGAN HAZARD INDEX	NON-CARCINOGENIC TARGET ORGAN HAZARD INDEX
[redacted]	>1		
		1.9	
	0.75-1		
		0.88	
		0.76	
		0.76	
		0.98	
		0.90	
		0.80	
		0.88	
	0.5-0.74		
		0.66	
		0.54	
		0.56	
		0.58	
		0.54	
		0.52	
		0.70	
		0.66	
		0.70	
		0.56	

Table 4-4 (CONT.)

S.E. ROCKFORD OPERABLE UNIT - INCREMENTAL TARGET ORGAN HAZARD INDICES FOR WELLS WHERE CONTAMINATION DETECTED *BELOW* MAXIMUM CONTAMINANT LEVELS

ADDRESS	HAZARD INDEX	CARCINOGENIC TARGET ORGAN HAZARD INDEX	NON-CARCINOGENIC TARGET ORGAN HAZARD INDEX
[redacted]	0.25-0.49		
		0.40	
		0.32	
		0.40	0.27
			0.32
		0.40	
		0.36	
		0.32	
		0.32	
		0.46	
		0.36	
		0.46	
		0.42	
		0.34	
		0.32	
		0.28	
			0.42
		0.36	
		0.40	
		0.38	
		0.42	
		0.36	
		0.38	
			0.37
		0.26	

Table 4-4 (CONT.)

S.E. ROCKFORD OPERABLE UNIT - INCREMENTAL TARGET ORGAN HAZARD INDICES FOR WELLS WHERE CONTAMINATION DETECTED *BELOW* MAXIMUM CONTAMINANT LEVELS

ADDRESS	HAZARD INDEX	CARCINOGENIC TARGET ORGAN HAZARD INDEX	NON-CARCINOGENIC TARGET ORGAN HAZARD INDEX
[redacted]	0.0-0.24		
		0.16	
		0.20	
		0.24	
			0.03
			0.19
			0.01
			0.01
			0.10
		0.22	
		0.24	
		0.22	
			0.18
		0.18	0.01
			0.01
			0.21
			0.03
			0.13
			0.01
		0.24	0.01
		0.12	
			0.20
			0.01
			0.02
			0.02
			0.02

Table 4-4 (CONT.)

S.E. ROCKFORD OPERABLE UNIT - INCREMENTAL TARGET ORGAN HAZARD INDICES FOR WELLS WHERE CONTAMINATION DETECTED *BELOW* MAXIMUM CONTAMINANT LEVELS

ADDRESS	HAZARD INDEX	CARCINOGENIC TARGET ORGAN HAZARD INDEX	NON-CARCINOGENIC TARGET ORGAN HAZARD INDEX
[redacted]	0.0-0.24		
			0.07
			0.02
			0.02
			0.02
		0.16	
			0.02
			0.01
			0.02
			0.02
			0.01
			0.01
			0.02
			0.01
			0.02
			0.11
			0.02
			0.02
			0.02
			0.01
		0.22	0.01
		0.24	0.10
			0.01
		0.14	0.01
			0.02
		0.14	
		0.02	0.00
			0.10
			0.01

which duplicate samples were obtained were also listed. The distribution of these wells is illustrated in Figure 4-1. These wells are primarily located in the south central portion of the study area.

Contamination was detected above an MCL for one or more contaminants in 25 of the 117 wells sampled. A list of these wells along with the contaminants and associated concentrations detected above MCLs is presented in Table 4-2. The distribution of these wells is illustrated in Figure 4-2. All but one of these wells is located west of 11th Street. The frequency of detection above MCLs is shown below for each contaminant.

CONTAMINANT	NO. OF WELLS DETECTED ABOVE MAXIMUM CONTAMINANT LEVELS
TCE	22
1,1-DCE	11
PCE	9
1,1,1-TCA	2
1,2-DCA	2
cis-1,2-DCE	2
Vinyl Chloride	1
Pb	2

Contamination was detected at levels below MCLS at 60 of the 117 wells sampled. A list of these wells along with the contaminant concentrations detected are presented in Table 4-3. The distribution of these wells and the hazard indices associated with the mixtures of contaminants detected are presented in Figures 4-3 and 4-4.

It should be noted that at one well, located at 2703 20th Street, only 1,1-DCA was detected (Table 4-3). There is no MCL or Illinois Potable Resource Criterion for this compound.

The mixtures detected represent typical transformation pathways for volatile chlorinated aliphatic chemicals (Smith and Dragun, 1984). Trichloroethylene (TCE) was detected at 53 of the 60 wells where

contaminants were detected at concentrations below MCLs. In many cases TCE was detected in combination with either a possible precursor, PCE, or its breakdown products, cis 1,2-DCE or 1,1-DCE. TCE and 1,1,1-TCA, contaminants that are not associated via their transformation pathways, were also frequently detected together.

At fifteen of these wells only one contaminant was detected. In nine of these cases TCE was the sole contaminant detected although PCE, cis-1,2-DCE, and 1,1,1-TCA were also detected as sole contaminants. In many of these wells only one carcinogenic substance and one non-carcinogenic substance comprised the mixture of contaminants detected. At 22 of these wells, the mixture of contaminants consisted of TCE and 1,1,1-TCA only.

Only one well had a carcinogenic hazard index above 1. Seven wells had hazard indices between 0.75 and 1; 10 wells had hazard indices between 0.50 and 0.74; 24 wells had hazard indices between 0.25 and 0.49 and 53 wells had hazard indices between 0.0 and 0.24. There were no non-carcinogenic hazard indices above 0.42. It should be noted that wells at which both non-carcinogenic and carcinogenic contaminants were detected may appear in more than one hazard index category.

Out of 18 wells with hazard indices above 0.5 (all carcinogenic) the most frequently found contaminant mixture was TCE and PCE, found at 13 of these wells. At 8 of these wells 1,1,1-TCA was also detected, although its presence as a non-carcinogen did not contribute to the hazard index.

The relatively low hazard indices calculated for the majority of wells in the study area do not appear to indicate a significant problem with regard to contaminant mixtures detected at concentrations below MCLs. However, wells within the two highest hazard index categories, greater than 1 and 0.75 to 1 may be of concern. It is important to consider the temporal movement of the contaminant plume because the contaminant profiles evaluated in this section will likely be influenced by such movement.

4.4 CONCLUSIONS

4.4.1 COMPARISON OF DATA TO MAXIMUM CONTAMINANT LEVELS

At 25 wells within the study area, contaminant concentrations exceed MCLs. The table below presents the excess lifetime cancer risks (ELCR) associated with lifetime ingestion of drinking water contaminated at concentrations equivalent to an MCL. These risks were calculated using standard exposure assumptions and the Cancer Potency Factors listed in the table.

COMPOUND	MCL (ug/l)	CANCER POTENCY FACTORS	ASSOCIATED EXCESS LIFETIME CANCER RISK
PCE	5	5.1×10^{-2} (USEPA, 1989)	7.2×10^{-6}
TCE	5	1.1×10^{-2} (USEPA, 1989)	1.6×10^{-6}
1,2-DCE	5	9.1×10^{-2} (USEPA, 1990)	1.3×10^{-5}
Vinyl Chloride	2	2.3 (USEPA, 1989)	1.3×10^{-4}

Exposure to contaminant concentrations above the MCL will be associated with cancer risks greater than the ELCRs listed above. Wells with particularly high concentrations of PCE, TCE, and vinyl chloride would be in the 1×10^{-4} to 1×10^{-3} cancer risk range. These levels are significantly higher than generally accepted cancer risk limits. It should be noted that cancer risks attributable to non-potable uses of the water (showering/bathing and other household water use), may be as high as risks attributable to ingestion of this water.

For non-carcinogens, the daily doses received as a result of ingestion of water contaminated at concentrations equivalent to MCLs and the Reference Doses (RfDS) for these contaminants are presented in the table below. An RfD represents the dose, which, if consumed for a lifetime, is not expected to result in any adverse health effects.

COMPOUND	MCL (ug/l)	DOSE/MCL (mg/kg/day)	REFERENCE DOSE (mg/kg/day)
1,1-DCE	7	2×10^{-4}	9×10^{-3} (USEPA, 1898)
trans-1,2-DCE	100	3×10^{-3}	2×10^{-2} (USEPA, 1990)
1,1,1-TCA	200	6×10^{-3}	9×10^{-2} (USEPA, 1990)
cis-1,2-DCE	70	2×10^{-3}	NA

Exposure to a concentration equivalent to an MCL would not result in a dose that exceeds any of the available RfDs. Although contaminant concentrations in a number of the study area wells are significantly higher than MCLs, it is not expected that exposures to contaminants at these concentrations would result in a dose in excess of any one RfD. However, if dose additivity is assumed, mixtures of similarly acting contaminants present in these wells may pose an unacceptable non-cancer risk. A more thorough evaluation of the non-carcinogenic risks associated with exposure to contaminant concentrations at these wells was beyond the scope of this assessment.

4.4.2 CARCINOGENIC HAZARD INDICES

Contamination was detected at concentrations below MCLs at 60 of the 117 wells. In all but 1 of these wells the carcinogenic hazard index is derived from PCE and/or TCE. A very low concentration of 1,2-DCE was detected in only one well. One of the evaluated wells had a carcinogenic hazard index greater than 1. For this well, an excess lifetime cancer risk of 8.3×10^{-6} has been calculated using standard exposure assumptions and Cancer Potency Factors of 5.1×10^{-2} and 1.1×10^{-2} for PCE and TCE respectively (USEPA, 1989).

Referring to the groundwater standards and associated cancer risks presented above, exposure to contaminant concentrations which result in a hazard index of 1 would be associated with an excess lifetime cancer risk of between approximately 7.2×10^{-6} and 1.3×10^{-4}, depending on the

components of the contaminant mixture. Because all other study area wells have carcinogenic hazard indices less than 1, the ELCR associated with exposure to drinking water at these wells will be less than 7.2×10^{-6}. Depending upon the particular regulatory framework used, these risks may or may not be considered significant.

4.4.3 NON-CARCINOGENIC HAZARD INDICES

Non-carcinogenic hazard indices did not exceed 1 for any of the wells at which contamination was detected at concentrations below MCLs. Therefore, the non-carcinogenic risks do not appear to be significant at these locations.

5.0 SUMMARY AND CONCLUSIONS

As a result of this study, the following conclusions were reached:

1. Based on the IEPA/USEPA data, a west-northwest trending plume of VOC contaminated groundwater extends across the study area from the vicinity of Reed Avenue and 24th Street. The contaminant plumes for TCE, 1,1,1-TCA, cis-1,2-DCE, 1,2-DCA, and 1,1-DCA have the same general features. Vinyl chloride and trans-1,2-DCE were detected at only a few locations in the study area. PCE had a distinctly shaped plume.

2. Based on the IDPH data, the plumes for TCE, 1,1,1-TCA, and 1,1-DCA show general features that are similar to the plumes for the IEPA/USEPA data.

3. Safe Drinking Water Act MCLs were exceeded for TCE, 1,1,1-TCA, cis-1,2-DCE, 1,2-DCA, 1,1-DCE, vinyl chloride, and lead, over various portions of the study area. The area where the TCE MCL is exceeded encompasses all of the other areas where any other MCL is exceeded except for a small area stretching from approximately Harrison Avenue and Kinsey Street to Wills Avenue and Marshall Street, and a single well located near 9th Street and Sandy Hollow Road (Figure 3-25).

4. Groundwater contamination by metals does not show a systematic distribution comparable to that observed for VOCs. Instead, localized metals contamination occurs at scattered locations across the study area, and appears to be the result of several unrelated point sources. Only two of the 117 samples collected for the Operable Unit remedial investigation exceeded an MCL for any metal.

5. At locations where MCLs were exceeded, levels of groundwater contamination pose both carcinogenic and non-carcinogenic health hazards. Outside the area where MCLs were exceeded, an evaluation of cumulative health risks showed that in general, Hazard Indices did not exceed 1. Non-carcinogenic health hazards in the study area do not appear to be significant. According to USEPA risk assessment guidance, a non-carcinogenic Hazard Index of less than 1 indicates that exposure to contaminants at these levels would not be associated with adverse health effects.

6. Contamination was detected above an MCL for one or more contaminants at 25 of the 117 wells sampled in this investigation. Excess lifetime cancer risk levels at a number of these wells are significantly greater than generally accepted cancer risk limits. Risks incurred as a result of exposure to non-carcinogenic contaminants in these wells may be significant if dose additivity is assumed.

6.0 REFERENCES

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APPENDIX A

SAMPLE COLLECTION SHEETS

Southeast Rockford Sample Collection Sheet

[redacted]

Sample No: _____

Samplers: Bob Hank, ~~Robin Layton~~

Date: 6/11

Sample Time: 1603

Start Purge: 1551

Est. Flow Rate: 27 seconds 1 gal.

End Purge: 1603

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1601	7.01	630	66 °F
2	1602	7.03	630	66 °F
3	1603	7.03	630	65 °F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: west side of house - outdoor spigot

Water Softener or other treatment? No water softner

Aerator on sample point spigot? None

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) NA

Other Comments: _____

Southeast Rockford Sample Collection Sheet

[redacted]

Sample No: _____

Samplers: Bob Hanks Robin Horton

Date: 6/11 Sample Time: 1525

Start Purge: 1509 Est. Flow Rate: 38 Seconds
1 gall

End Purge: 1525

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1519	6.98	630	~~68°F~~ RT 77°F
2	1522	7.02	730	77°F
3	1524	7.07	730	77°F
4	1525	7.07	730	77°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Kitchen Sink

Water Softener or other treatment? No water softener

Aerator on sample point spigot? removed before Sampling

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

approx 32-33 year old well

Other Comments: Single handle faucet
hard to determine exact cold water
position

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Scott Hodge / Rob. Noonan

Date: 6/12/90 Sample Time: 12:52

Start Purge: 12:39 Est. Flow Rate: 1 gallon 25 seconds

End Purge: 12:49

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	12:49	8.01	620	62
2	12:50	8.07	610	63
3	12:51	8.05	610	63
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outdoor spigot on south side of home

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Norton / Butler

Date: 6/14/90 Sample Time: 11:37

Start Purge: 11 24 Est. Flow Rate: 1 qt. in 7 sec.

End Purge: 11:38

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	11:35	4.57	760	64° F
2	11:36	4.55	740	60° F
3	11:37	4.57	740	60° F
4	11:38	4.51	720	60° F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot, south side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: [redacted] Samplers: Butler/Norton

Date: 6/14/90 Sample Time: 15:10

Start Purge: 14:47 Est. Flow Rate: _____

End Purge: 15:09

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	14:57	3.46	600	64
2	14:58	3.71	590	63.5
3	14:59	3.69	570	63.5
4	15:00	4.07	590	63
5	15:05	4.14	550	63
6	15:08	~~4.14~~ 4.20	590	63.5
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot North side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: _____ Samplers: Butler / Norton

Date: 6/14/90 Sample Time: 16:05

Start Purge: 15:51 Est. Flow Rate: 1 ft. in 5 sec.

End Purge: 16:04

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1600	3.51	850	59°F
2	1603	3.57	800	59°F
3	1604	3.70	790	58°F
4				
5				
6				
7				

2.0

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot north side house

Water Softener or other treatment? Yes, there was a filter, but it was removed prior to sampling.

Aerator on sample point spigot? Yes.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident _____ Samplers: Butler/Martin

Date: 6/13/96 Sample Time: 14:54

Start Purge: 14:30 Est. Flow Rate: 1 quart in 8 seconds

End Purge: 14:54

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	14:40	5.86	670	62
2	14:45	5.67	650	61
3	14:46	5.37	610	60
4	14:48	5.28	610	61
5	14:51	5.62	650	61
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot south side house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: Well only used for watering lawn, washing car etc. On city water.

Cochran

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Butler / Norton

Date: 6/14/90 Sample Time: 9:23

Start Purge: 9:04 Est. Flow Rate: 1 qt. in 6 sec

End Purge: 9:22

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	9:15	3.56	700	61°F
2	9:16	3.75	700	61°F
3	9:17	4.30	690	60°F
4	9:19	4.16	700	60°F
5	9:20	4.58	690	61°F
6	9:21	4.59	670	60°F
7	9:22	4.59	670	60°F

5 L
V = 0

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot South side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Butler / Norton

Date: 6/13/10 Sample Time: 17:08

Start Purge: 16:50 Est. Flow Rate: 1 gallon 20 seconds

End Purge: 17:07

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	17:04	4.96	610	61
2	17:05	5.05	610	60.5
3	17:07	5.20	610	59.5
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outdoor Spigot Southeast side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Butler / Horton

Date: 6/14/90 Sample Time: 12:30

Start Purge: 12:17 Est. Flow Rate: 1 quart in 6 seconds

End Purge: 12:29

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	12:27	4.59	710	61
2	12:28	4.53	690	61
3	12:29	4.54	700	60
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot on shed west side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Lantz / Bhagat

Date: 6/17 Sample Time: 1325

Start Purge: 1254 Est. Flow Rate: 1.5gal in 63 sec

End Purge: 1322

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1317	7.19	690 µmhos	59°F
2	1318	7.18	690	58
3	1319	7.16	690	58
4	1319	7.16	690	58
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot, Northeast side of house

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

2" steel casing, well has been here at least 6 years

Other Comments: Well is located in basement, line leading to outside spigot has about 5 feet of black, dense, plastic, most pipes are galvanized steel.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Lantz / Blagsat

Date: 6/17 Sample Time: 1555

Start Purge: 1526 Est. Flow Rate: 2.5 gal in 2 min 5 sec (125 sec)

End Purge: 1551

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1547	7.25	750 umhos	56° F
2	1548	7.23	750	56
3	1549	7.24	760	56
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Kitchen Sink - No outside faucet.

Water Softener or other treatment? No Water Softener

Aerator on sample point spigot? No - taken off before sampling

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is about 37' deep - driven. 2" steel well, Hit water at around 26'

Other Comments: All pipes leading up to sample point are galvanized steel

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Laura / Bhagat

Date: 6/12 Sample Time: 1515

Start Purge: 1446 Est. Flow Rate: 2.5 gal in 35 sec

End Purge: 1512

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1507	7.32	950 umhos	55.5°F
2	1508	7.28	950	55.5
3	1509	7.27	950	55
4	1510	7.26	950	55
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot on Northeast side of House

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

All metal piping out to sample point, well is at least 33 years old, & 1" galvanized steel pipe to well

Other Comments:

Field blank taken here.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Butler / Martin

Date: 6/13/90 Sample Time: 11:03

Start Purge: 10:47 Est. Flow Rate: 1 gallon in 20 sec

End Purge: 11:03

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	10:57	5.67	520	62°F
2	11:00	5.78	520	60°F
3	11:03	5.83	520	60°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot west side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Nam[redacted] Samplers: Butler / Norton

Date: 6-13 Sample Time: 10:15

Start Purge: 9:57 Est. Flow Rate: 1 gallon in 20 sec.

End Purge: 10:25

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	10:07	6.35	790	60°F
2	10:13	6.36	790	60°F
3	10:15	6.38	790	61°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot west side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Other Comments: Brass faucet. Difficulty in getting sample w/no bubbles. Attempted using several different flow rates. Repeated attempts still resulted in samples w/ tiny bubbles

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Butler / Norton

Date: 4/13/90 Sample Time: 9:44

Start Purge: 9:31 Est. Flow Rate: 2.5 gal in 50 Sec.

End Purge: 9:44

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	9:42	6.54	830	61°F
2	9:43	6.51	810	60°F
3	9:44	6.47	800	62°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot on south side House

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted]

Resident's

Sample No: _____

Samplers: Butler / Norton

Date: 6/13/90

Sample Time: 9:15

Start Purge: 9:47

Est. Flow Rate: 1 quart in 20 seconds

End Purge: 9:14

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	8:57	5.82	720	67°F
2	9:00	5.65	700	62°F
3	9:01	5.80	690	62°F
4	9:03	6.16	690	61°F
5	9:12	6.46	700	66°F
6	9:13	6.48	690	63°F
7	9:14	6.49	690	62°F

PH Cond. Temp
9:15 6.50 690 62°

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Kitchen spigot

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: Pressure pump turned on - had to turn off faucet. Will take 3 more pH, Conductivity, and temperature tests;

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: _____ Samplers: Norton/Butler

Date: 6/15/90 Sample Time: 15:52

Start Purge: 15:36 Est. Flow Rate: 1 gallon 19 seconds

End Purge: 15:51

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1547	8.92	620	69°F
2	1548	9.24	600	68°F
3	1550	9.32	600	67°F
4	1551	9.40	590	66°F
5				
6				
7				

8 9.24
8.92
32 9.4
9.32 15
9.24
.15

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: outdoor spigot on east side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Resident doesn't know anything about Well

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: 1225

Date: 6/17 Sunday Sample Time: Can #2 / Bleach at

Start Purge: 1157 Est. Flow Rate: 1 liter in 10 sec.

End Purge: 1223

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1218	7.26	670 umhos	56.5°F
2	1219	7.31	670	56.5
3	1220	7.36	670	56.5
4	1221	7.33	670	56.5
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: kitchen Sink

Water Softener or other treatment? No Water Softener or other treatment

Aerator on sample point spigot? No - taken off

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is at least 15 years old

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: [redacted] Samplers: Butler / Mata

Date: 6/15/90 Sample Time: 11:11

Start Purge: 10:59 Est. Flow Rate: 1 gallons 36 seconds.

End Purge: 11:11

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	11:09	5.98	600	61.5
2	11:10	5.99	600	62
3	11:11	5.98	600	62
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot east side of house

Water Softener or other treatment? ~~Not sure, but we sampled from outside spigot.~~ RN ~~Yes~~ RN No. No Water Softner.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Son did not have information. Father came out later. Well made w/ metal pipes. No other info.

Other Comments: ~~Father was asleep, but told children~~ to let us sample when we arrived. Son did not. Called around 1:00pm. Mom came out later.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Austin / Burden

Date: ~~6/13/90~~ 6/14/90 Sample Time: 9:44

Start Purge: ~~17:44~~ 9:30 Est. Flow Rate: ~~1 gpm in seconds~~

End Purge: 9:43

Pump stopped 6/13/90.

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	9:41	4.66	720	62°F
2	9:42	4.73	720	61°F
3	9:43	4.73	730	62°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot on west side of house

Water Softener or other treatment? no

Aerator on sample point spigot? no

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: Let rest 6/13/90. Due to tornado & subsequent power outage no time to try sampling a second time on 6/14/90.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Bartlett / Hanson

Date: 6/13/90 Sample Time: 18:22

Start Purge: ~~6:04~~ 18:03 Est. Flow Rate: 1 quart in 6 seconds

End Purge: 18:21

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	18:14	5.46	710	61
2	18:17	6.57	700	60
3	18:19	7.20	690	61
4	18:21	NA	700	60
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot south side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Rys

Date: 6/13 Sample Time: 14:41

Start Purge: 14:22 Est. Flow Rate: 1/2 gal in 11 sec. (measured from Milk jug)

End Purge: 14:41

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	14:36	7.32	540	56°F
2	14:37	7.31	540	55°F
3	14:39	7.33	530	56°F.
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Spigot on E side of House

Water Softener or other treatment? No Water Softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Resident doesn't know details.

Other Comments: Well is visible in yard SW of house
Lots of rust particles in purge water.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Lantz/Rys

Date: 6/13 Sample Time: _____

Start Purge: 14:56 Barge inbound Est. Flow Rate: 1gal in 8 sec.
START AT 1511

End Purge: 1526

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1521	7.37	530	55
2	1522	7.31	520	54
3	1524	7.32	520	54
4	1525	7.36	510	54
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot near porch on west side of house

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: Well is visible in bushes on west side of house. Well was worked on approx 10 days ago, resident doesn't know what work was done.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Lantz / Ryse

Date: 6/13 Sample Time: 12:40

Start Purge: 12:22 Est. Flow Rate: 2.5 gal in 33 sec

End Purge: 12:40

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1235	7.37	505	55°F
2	1236	7.35	500	55°F
3	1237	7.36	500	55°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot on SW side of House

Water Softener or other treatment? existing softener is not hooked up - softener is bypassed both in and outside house

Aerator on sample point spigot? No.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Resident doesn't know details of well. Seal on well was replaced November of 1996.

Other Comments: Well is visible in yard on SW side of house Excessive amounts of bubbles in sampled water out of spigot Sample taken just prior to start of major Thunderstorm

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Cantz / Rys

Date: 6/13 Sample Time: 1831

Start Purge: 18:10 Est. Flow Rate: 1 gal in 11 sec

End Purge: 18:31

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1826	7.31	550	56°F
2	1827	7.31	550	55°F
3	1828	7.31	550	~~56°F~~ R 55°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot on SW side of house

Water Softener or other treatment? No Water softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Well drilled pre-1965

Other Comments: well is visible in peonies in front yard
*Field Blank collected Here. Was difficult to obtain
A Good VOC sample 2 bubbles were an excessive problem

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Lantz/Blanyat

Date: 6/17 Sample Time: 1630

Start Purge: 1605 Est. Flow Rate: 2.5 gal in 24 sec.

End Purge: 1626

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1622	7.33	465 umhos	56°F
2	1623	7.23	465	56
3	1624	7.33	460	56
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot, Southwest side of house

Water Softener or other treatment? In basement but not hooked up according to resident

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Resident doesn't know details of well construction.

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Rys

Date: 6/13 Sample Time: 10:55

Start Purge: 10:36 Est. Flow Rate: 2.5 gal / 25 seconds

End Purge: 10:55

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1046	7.25	490	58°F
2	1050	7.31	477	56° F
3	10:51	7.30	472	56° F
4	10:52	7.31	472	55°F
5	10:53	7.31	471	55°F
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot on West side of house (brass)

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point-spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Well was drilled in ~1960, extended to approx. 150' in ~1980. 6" diameter steel casing.

Other Comments: Well is on SW side of house

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Blagsat

Date: 6/19 Sample Time: 1805

Start Purge: 1743 Est. Flow Rate: 2.5 gal. in 30 sec.

End Purge: 1803

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1800	7.12	750 µmhos	57.5°F
2	1801	7.16	750	57
3	1802	7.14	740	57
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot, Southeast side of house

Water Softener or other treatment? Filtration on Kitchen sink only, but outside spigot bypasses filter.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is 60 feet deep, steel pipe. Water is at 46 feet.

Other Comments:

Southeast Rockford Sample Collection Sheet

CC1

Address: [redacted] Sample No: _____

Resident's Name: _____ Samplers: Norton / Burton

Date: ~~15:48~~ 6/18/96 Sample Time: 16:01

Start Purge: 15:48 Est. Flow Rate: 1 gallon 25 seconds

End Purge: 16:00

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	15:58	7.35	710	62
2	15:59	7.36	702	61
3	16:00	7.36	702	61
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outdoor spigot, north side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

~~25~~ feet deep; ≈25 yrs old

Other Comments: Alternate for #5 Kenron

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Butler/Nodge

Date: 6/19/90 Sample Time: 2:55

Start Purge: 2:35 Est. Flow Rate: 2.5 gal in 40 sec

End Purge: 2:50

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	2:45	7.34	768	63.5°F
2	2:46	7.29	772	63.1°F
3	2:47	7.27	779	63.0°F
4	2:48	7.32	779	62.9°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Southwest corner of house - spigot.

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

- aq - approx. 40-45 yrs. old; approx 38 ft. deep;
- Slotted Steel, Johnson Point; 25 gallon tank

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name [redacted] Samplers: Norton/Butler

Date: 6/15/90 Sample Time: ~~12:15~~ PM 12:23

Start Purge: 12:02 Est. Flow Rate: 1 gallon in 40 seconds

End Purge: 12:22

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	~~12:12~~	8.71	~~700~~	63
2	12:13	8.61	650	63
3	12:14	8.19	690	63
4	12:14	7.62	690	63
5	12:15	7.37	790	63
6	12:19	7.05	750	63
7	12:22	7.01	750	63

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Kitchen spigot.

Water Softener or other treatment? No

Aerator on sample point spigot? No.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Resident didn't have any information on her well.

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Loutz / Bhagat

Date: 6/16 Sample Time: 1445

Start Purge: ~~1406~~ RL 1415 Est. Flow Rate: ~~25 gal in 38 sec~~

End Purge: 1438

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1433	7.15	753	60.5
2	1435	7.15	733	58.2
3	1436	7.15	730	57.8
4	143	7.14	720	57.8
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot, ~~South~~ Southeast side of house (sample spigot changed after looking at well & plumbing)

Water Softener or other treatment? Water softener inside house, but outside tap bypasses softener

Aerator on sample point spigot? _____

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Resident doesn't know details of well construction, well was probably drilled pre-1950

Other Comments: Well is located in basement of house Duplicate sample taken here. Rain ceased prior to sampling. Sand is present in well water (reddish color)

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Bellas / Marta

Date: 6/15/90 Sample Time: 12:50

Start Purge: 12:37 Est. Flow Rate: 1 gallon in 36 seconds

End Purge: 12:49

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1247	7.56	760	62 °F
2	1248	7.68	750	60 °F
3	1249	7.52	740	60 °F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot west side of home

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: Mrs. Bellas was aware that we would be coming to sample. However, she was not home at the time. The babysitter allowed us to sample

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Luntz / Blagat

Date: 6/16 Sample Time: 1530

Start Purge: 1503 Est. Flow Rate: 2.5 gal in 37 sec

End Purge: 1526

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	15:22	7.07	722 umhos	59.8°F
2	15:23	7.08	710	58.9
3	1524	7.09	710	58.7
4	1525	7.07	710	58.7
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot north side of house.

Water Softener or other treatment? Water softener is by passed by outside spigot.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

2" steel riser pipe, Well is at least 17 years old. Well depth is approximately 40 feet.

Other Comments: Line leading to faucet is PVC. Well is located in basement of house. Matrix Spike Sample Taken here.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: _____ Samplers: Norton / Butler

Date: 6/15/90 Sample Time: 1426

Start Purge: 14:07 Est. Flow Rate: 1 gallon in 8 seconds

End Purge: 14:25

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	14:17	8.85	710	62
2	14:20	~~8.39~~ 8.39	710	63.5
3	14:24	8.33	710	64
4	14:25	8.34	710	63
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: ~~South of house~~ North side garage - outdoor spigot

Water Softener or other treatment? NO

Aerator on sample point spigot? NO

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is ≈ 20 yrs old ; is ≈ 60 ft deep. Well & plumbing in house is metal, but pipes leading to outdoor well are PVC.

Other Comments:

Southeast Rockford Sample Collection Sheet

Address [redacted] Sample No: _____

Residen [redacted] Samplers: Norton/Butler

Date: 6-15-98 Sample Time: 15:00

Start Purge: 14:45 Est. Flow Rate: 1 gallon 40 seconds

End Purge: 14:59

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1455	8.14	690	61°F
2	1457	8.07	640	60°F
3	1459	8.11	650	59°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outdoor spigot, east side house.

Water Softener or other treatment? Yes, but not hooked up to outdoor spigot

Aerator on sample point spigot? No.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) She resident had no information about the well.

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Almanza / Hodge

Date: 6-17-90 Sample Time: ~~1435~~ 1440

Start Purge: 1421 Est. Flow Rate: 2.5 gal / 17 sec.

End Purge: 1439

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1436	7.27	827 µmho	71.4°
2	1437	7.28	782 µmho	65.5°
3	1438	7.28	775 µmho	65.5°
4	1439	7.29	774 µmho	64.4°
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: West side of house (spigot)

Water Softener or other treatment? None

Aerator on sample point spigot? NO

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) ~40 yrs old, steel Const.

Other Comments: None (Teflon tape on spigot)

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Bob Hord / Robin Hoehn

Date: 6/12/10 Sample Time: 1 quart in 15 seconds

Start Purge: 1642 Est. Flow Rate: 1655

End Purge: 1655

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1652	7.13	610	59
2	1653	7.15	600	60
3	1655	7.28	600	59
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: kitchen spigot

Water Softener or other treatment? no

Aerator on sample point spigot? no

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) 23½ ft deep
Well made of metal, homeowner thinks it's iron.

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Bob Hank / Robin Nicholson

Date: 6/12/90 Sample Time: 16:23

Start Purge: 16:06 Est. Flow Rate: 1 gallon 25 seconds

End Purge: 16:21

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	16:16	7.30	400	60
2	16:19	7.40	400	60
3	16:22	7.40	405	60
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot

Water Softener or other treatment? No.

Aerator on sample point spigot? No.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Well is about 24 ft deep. This well put in 6 years ago. Original well just 2 feet away

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Robin Norton / Bob Hank

Date: 6/12/90 Sample Time: 15:37

Start Purge: 15:22 Est. Flow Rate: 1 quart at 10 seconds

End Purge: 15:32

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	15:32	7.46	700	64
2	15:34	7.47	700	64
3	15:35	7.47	700	64
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: kitchen spigot

Water Softener or other treatment? N

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Lantz / Butler

Date: 6/12/90 Sample Time: 16:22

Start Purge: 15:57 Est. Flow Rate: 2.5 gal in 1:15 sec.

End Purge: 16:22

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1615	7.05	700	58°F
2	1617	7.05	690	58°F
3	1619	7.04	690	58°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Kitchen sink

Water Softener or other treatment? No water softener or treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Well is probably about 50 years old, No other details known

Other Comments: Duplicate taken here;

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Buttle/NORTON

Date: 6/14/90 Sample Time: 1635

Start Purge: 1620 Est. Flow Rate: 1 quart in 12 seconds

End Purge: 1634

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1631	4.66	850	66° F
2	1632	4.66	800	65° F
3	1633	4.74	800	65° F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Kitchen Spigot

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: [redacted] Samplers: Butler / Norton

Date: 6/14/90 Sample Time: 1741

Start Purge: ~~=~~ 1723 Est. Flow Rate: 1 gpm in 8 seconds

End Purge: 1739

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1733	4.45	650	59°F
2	1734	4.79	650	59°F
3	1737	4.46	650	59°F
4	1739	4.45	640	58°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: ~~Ps~~ Outside spigot east side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Lauren / Rys

Date: 6/13 Sample Time: 16:28

Start Purge: 16:08 Est. Flow Rate: 1gal in 10 sec.

End Purge: 1628

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	16:23	7.25	620	56°F
2	16:24	7.23	620	56°F
3	16:25	7.23	620	56°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Spigot on Well House on SW side of House

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Well was driven 2 yrs ago, 50 feet deep, 2" steel pipe
Residents say water is ~30 feet

Other Comments: Collected MATRIX Spike Duplicate

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Butler / Norton

Date: 6/14/90 Sample Time: 14:35

Start Purge: 14:19 Est. Flow Rate: 1 quart in 6 seconds

End Purge: 14:34

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1429	4.08	450	62°F
2	1431	4.03	710	62°F
3	1433	4.58	710	62°F
4	1434	4.01	710	62°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot south side house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Lantz / Blagat

Date: 6/16/90 Sample Time: 1215

Start Purge: 11:53 Est. Flow Rate: 2.5 gal in 110 sec.

End Purge: 1213

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1209	7.39	650 µmhos	56°F
2	1210	7.40	640	56
3	1211	7.41	650	56
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot beneath awning on South side of house

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: Sample point is protected from rain by awning

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Rigs

Date: 6/13 Sample Time: 17:10

Start Purge: 16:49 Est. Flow Rate: 1 gal in 15 sec

End Purge: 17:09

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	17:03	7.22	610	58 60°F
2	17:05	7.24	590	57°F
3	17:06	7.24	580	57°F
4	17:07	7.26	580	57°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot on SW side of House

Water Softener or other treatment? Water Softener bypassed on outside tap.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Drilled before 1950, Resident doesn't know other details.

Other Comments: Well is in basement

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Norton / Butler

Date: 6/13/90 Sample Time: 11:32

Start Purge: 11:17 Est. Flow Rate: 1 gallon in 17 seconds

End Purge: 11:32

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	11:27	5.95	650	62° F
2	11:29	5.77	600	59° F
3	11:30	5.71	600	59° F
4	11:31	5.68	590	59° F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot ~~south~~ South side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Almanza / Hodge

Date: 6-16-90 Sample Time: 1214

Start Purge: 1146 Est. Flow Rate: 1 qt. / 4 sec.

End Purge: 1212

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1204	7.24	495 µmho	65.2°
2	1208	7.29	480 µmho	62.6°
3	1210	7.33	476 µmho	62°
4	1211	7.32	474 µmho	62°
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: N.W. side of House.

Water Softener or other treatment? None

Aerator on sample point spigot? No (spigot)

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Steel, Shallow, ~1960

Other Comments: None (Field Blank collected at this location) (Sample Time 1216)

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Amanda Hodge

Date: 6-17-98 Sample Time: 1314

Start Purge: 1255 Est. Flow Rate: 2.5 gal / 91 sec.

End Purge: 1313

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1308	7.12	656 µmho	69°
2	1309	7.13	639 µmho	66°
3	1310	7.13	633 µmho	64.6°
4	1311	7.11	630 µmho	64.3°
5	1312	7.13	626 µmho	64.1°
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Kitchen Sink

Water Softener or other treatment? Cold water is Not softened.

Aerator on sample point spigot? Yes But Removed.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) ~ 36 ft. Deep. Galvanized Steel,

Other Comments: Hot water is softened Cold is Not.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: _____ Samplers: Norton / Butler

Date: 6/18/90 Sample Time: 10:56

Start Purge: 10:39 Est. Flow Rate: 1 gallon 45 seconds

End Purge: 10:55

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	10:50	7.27	~~610~~ 640	61.5
2	10:54	7.30	590	59.5
3	10:55	7.32	580	59.5
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Bathroom spigot.

Water Softener or other treatment? No.

Aerator on sample point spigot? No.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Well is about 40 years old. No other information is available.

Other Comments: Some suspended solids in water

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Na[redacted] Samplers: Landy, Butler

Date: 6/11/90 Sample Time: 2:13

Start Purge: 1:56 Est. Flow Rate: 2.5 gal in 25 sec

End Purge: 2:13

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	2:07	7.28	610	64°F
2	2:08	7.25	600	59°F
3	2:09	7.25	600	60°F
4	2:11	7.24	600	59.5°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot, SE corner of House

Water Softener or other treatment? _____

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) unknown

Other Comments: Recently installed pump
Well is visible west side of house
Steel construction

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Lopez / Alvarez

Date: 6/15 Sample Time: 1525

Start Purge: 1455 Est. Flow Rate: 2.5 gal in 45 sec.

End Purge: 1520

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1514	7.14	640 µMho	56.5°
2	1516	7.15	630 µMho	56°
3	1516	7.15	630 µMho	56°
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside tap on west side of house

Water Softener or other treatment? No water softener or filters.

Aerator on sample point spigot? _____

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Well is 48' deep, 2" steel casing - PVC running to pump

Other Comments: Well is located in basement

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz/Almanza

Date: 6/18 Sample Time: 1125

Start Purge: 1053 Est. Flow Rate: 1 liter in 5 sec

End Purge: 1118

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1113	7.20	709	58.4°F
2	1114	7.20	700	57.8°F
3	1115	7.21	700	58.0°F
4	1116	7.20	696	58.0°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot, South side of House

Water Softener or other treatment? ?

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: Resident Not Home

Matrix Spike duplicate taken here.

Well is located in backyard in a pit near fence, west of back porch. Black HDPE pipe leads from well to house.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] (wk) 399-8922 Samplers: Connie / Rys

Date: 6/13 Sample Time: 12:00

Start Purge: 10:36 Est. Flow Rate: 2.5 gal in 25 sec.

End Purge: 11:57

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	11:51	7.14	640	56°
2	11:53	7.13	640	57°
3	11:54	7.13	640	~~57°~~ RL 55°
4	11:55	7.14	640	55°
5	11:56	7.14	640	55°
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Brass spigot near door on S. Side of Bldg.

Water Softener or other treatment? Water softener is used, but sample spigot is definitely not softened.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Manager* does not know any details about well.

*Connie

Other Comments: Angie Proventano is owner of bldg. Well is located in concrete well house on S. end of building. Duplicate Sample TAKEN Here. Purge water is cloudy.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Alvarenga

Date: 6/15 Sample Time: 11:50

Start Purge: 11 ~~10~~ 09 : 18 Est. Flow Rate: Approx 1 gal in 15 sec (can't measure accurately because faucet is at ground level.)

End Purge: AM ~~10~~ 11:42

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1136	7.32	550 µMoh	55.5°
2	1137	7.31	510 µMoh	55.5°
3	1139	7.28	550 µMoh	55°
4	1140	7.30	550 µMoh	55°
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot near garage at front (E side) of house

Water Softener or other treatment? Probably not

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is at least 13 years old, resident doesn't know other details of well construction

Other Comments: Well is visible in front yard, east of house near fence. Resident is pretty sure she doesn't pay water bill

*Duplicate Sample taken here.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Lantz, Butler

Date: 6/11/90 Sample Time: 2:52

Start Purge: 2:35 Est. Flow Rate: 2.5 gal in 29 seconds

End Purge: 2:52

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	2:46	7.04	620	56°F
2	2:48	7.03	625	55.5°F
3	2:49	7.01	620	55°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: SW corner of House; outside Spigot

Water Softener or other treatment? No water softener.

Aerator on sample point spigot? no

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Probably installed in 1940's.

Other Comments: House is on well water; Duplicate sample to be taken here

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Butler / Norton

Date: 4/19/90 Sample Time: ~~4:11~~ PMW 4:12

Start Purge: 4:00 Est. Flow Rate: 2.5 gal in 1 min and 50 sec

End Purge: ~~4:11~~ PMW 4:12

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	4:08	7.31	704	65°F
2	4:09	7.29	686	62.4°F
3	4:10	7.27	653	62.5°F
4	4:11	7.25	680	62.3°F
5	4:12	7.26	685	63°F
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: inside faucet

Water Softener or other treatment? no

Aerator on sample point spigot? no

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Owner does know any of above.

Other Comments: Water tested by IDPH approx. 5 months ago - by passes holding tank & will do MSD here.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: [redacted] Samplers: Norton / Butler

Date: 6/18/90 Sample Time: 16:29

Start Purge: 16:15 Est. Flow Rate: 1 gallon 20 seconds

End Purge: 16:28

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1626	7.29	760	60.1°F
2	1627	7.32	720	59.5°F
3	1628	7.36	720	59.5°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outdoor spigot; west side of house.

Water Softener or other treatment? No.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) No Resident had no information

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Laura / Amanda

Date: 6/14 Sample Time: 1955

Start Purge: 1925 Est. Flow Rate: 2.5 gal in 55 sec.

End Purge: 1950

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1950	7.24	813	61.0°F
2	1951	7.26	813	61.0°F
3	1952	7.25	813	61.0°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot, north side of house.

Water Softener or other treatment? Yes, but can be bypassed by valve on softener, which is ~~about~~ in bypass position.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Resident doesn't want to talk about well.

Other Comments: Well is located in concrete pit north of house

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Butler / Martin

Date: 6/15/90 Sample Time: 11:39

Start Purge: 11:26 Est. Flow Rate: 1 gallon in 32 seconds

End Purge: 11:39

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	11:37	6.74	610	59
2	11:38	6.62	610	59
3	11:39	6.55	610	59
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Kitchen spigot

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) NA. Ohnstad ~~[illegible]~~ did not know anything about the well.

Other Comments: This site used to be a gas station.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Butler / Norton

Date: 6/14/90 Sample Time: 10:13

Start Purge: 9:58 Est. Flow Rate: 1 quart in 7 seconds

End Purge: 10:12

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	10:08	4.67	670	62
2	10:09	4.64	670	61
3	10:10	4.61	760	61
4	10:11	4.56	720	61
5	10:12	4.54	710	61
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot west side house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: instead of 615 Bauman

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Norton/Baltar

Date: 6/14/90 Sample Time: 10:44

Start Purge: 10:28 Est. Flow Rate: 1 qt in seconds

End Purge: 10:43

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	10:39	4.65	500	62
2	10:41	4.42	650	60
3	10:42	4.39	690	60.5
4	10:43	4.32	696	60
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot, east side house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident: [redacted] Samplers: Butler / Hodge

Date: 6/19/96 Sample Time: ~~11:35~~ 11:45

Start Purge: 11:20 Est. Flow Rate: 2.5 gal in 1 min, 17

End Purge: ~~11:35~~ 11:45

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	11:37	7.25	868	64.5°F
2	11:38	7.25	849	63°F
3	11:39	7.24	837	61.8°F
4	11:40	7.25	836	61.5°F
5	11:41	7.25	851	62.4°F
6	11:41	7.25	817	63.4°F
7	11:42	7.24	822	63.6°F

TIME pH Cond. TE
8. 11:43 7.24 825 6
9. 11:44 7.25 825 63.

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: West side of house -

Water Softener or other treatment? no

Aerator on sample point spigot? no

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) resident thinks well is shallow; (20-30 ft. deep) does not know any other info on well -

Other Comments: Duplicate taken here -

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Bhagat

Date: 16 June 1990 Sample Time: 1025

Start Purge: ~~1058~~ RL 0958 Est. Flow Rate: ~2.5 gal in 25 sec

End Purge: 1021

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1017	7.47	690 umhos	55°F
2	1018	7.49	680	55.5
3	1019	7.49	680	55.5
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot underneath awning over back porch - SW side of house

Water Softener or other treatment? Harold does have water softener, but sample point bypasses softener

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) 2" steel casing. Well was drilled around 1950, approx 30 feet deep, sand point well. Water is approx 20 - 22 feet.

Other Comments: Line from well to spigot is PVC pipe. Raining outside, but sample collected under awning on back porch.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: [redacted] [redacted] Samplers: Lantz / Alvarez

Date: 6/15 Sample Time: 1715

Start Purge: 16:46 Est. Flow Rate: ≥ 2.5 gal in 70 sec

End Purge: 1715

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1708	7.31	660	62°F
2	1710	7.31	670	60.5°F
3	1711	2.31	670	61°F
4	1712	7.30	670	61°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside tap on North side of house

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is at least 17 years old - No other details known

2" steel casing

Other Comments: Well is outside on South side of house.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Lantz/Rys

Date: 6/13 Sample Time: 10:43

Start Purge: 10:21 Est. Flow Rate: 1 gal in 46 sec.

End Purge: 10:43

~~Good results~~ resident will move within a few weeks, but mail should still be forwarded.

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1037	7.29	700	60°F
2	1039	7.25	700	60
3	1040	7.25	700	60
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot on east side of house

Water Softener or other treatment? No water softener or other treatment.

Aerator on sample point spigot? No.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Resident doesn't know details of well construction

Other Comments: No other residents connected to this well. Well is in basement

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz/Butler

Date: 6/12/90 Tuesday Sample Time: 18:39

Start Purge: 18:16 Est. Flow Rate: 2.5 gal in 28 sec

End Purge: 18:39

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1832	7.21	510	55.5 °F
2	1833	7.21	510	55 °F
3	1835	7.16	510	55°F
4	1836	7.14	505	55°F
5	1838	7.10	505	55° F
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot behind western bushes on S. side of house

Water Softener or other treatment? Water softener in house, but not on outside spigot

Aerator on sample point spigot? No.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well was drilled in 1960, 95' deep, ~~Actual well pipe~~, 6" steel casing, Water level at approx. 30 feet.

Other Comments: Sand appears on bottom of pitchers. When testing for pH, cond. + temp. Lots of tiny bubbles in purge water, but none in VOC samples.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: [redacted] Samplers: Lantz/Butler

Date: 6/12 Sample Time: 15:16

Start Purge: 14:56 Est. Flow Rate: 2.5 gal in 45 sec.

End Purge: 15:16

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	15:10	7.31	520	57.5°F
2	15:12	7.32	520	57.5°F
3	15:14	7.34	520	57.5°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: outside spigot behind bushes on south side of House

Water Softener or other treatment? No Water Softener or Filter.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well drilled about 1968, 144' deep, water at 104', metal pipe

Other Comments: Well is visible in yard NE of house

Every VOA vial taken had numerous bubbles; impossible to collect an air-bubble free sample here — Bucket of purge water had foam on top after sitting undisturbed for 5 min.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Lantz / Butler

Date: 6/12 Sample Time: 2.5 gpm in 35 sec

Start Purge: 13:56 Est. Flow Rate: 14:30

End Purge: 14:26

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	2:17 (14:17)	7.25	~~460~~ 465	56°F
2	14:19	7.23	460	55°F
3	14:20	7.23	455	55.5°F
4	14:21	7.26	455	55°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: spigot (outside) on SE side of house

Water Softener or other treatment? No softener or other treatment, No filter

Aerator on sample point spigot? _____

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Well is 90 feet deep, well drilled pre-1990, well is about 4"-6" metal pipe,

Other Comments: Purge water appears cloudy

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Na[redacted] Samplers: Cantz / Rys

Date: 6/13 Sample Time: 18:00

Start Purge: 17:37 Est. Flow Rate: 1 gal in 9 sec

End Purge: 17:57

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1751	7.36	481	55.5
2	1752	7.37	475	54.5
3	1953 6	7.40	473	54.5
4	1758	7.41	471	54.5
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot on north side of house

Water Softener or other treatment? No water softener or treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Well was drilled around 1960, Residents daughter doesn't know details of well construction - 6" steel casing

Other Comments: Residents well is located in under ground well house connected to shop area. All pipes leading to spigot are insulated.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Lantz / Butler

Date: 6/11/90 Sample Time: 16:10

Start Purge: 15:37 Est. Flow Rate: 2.5 gal in 2:20

End Purge: 16:10

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	4:03	6.95	730	64°F
2	4:05	6.95	730	64°F
3	4:07	6.95	720	64°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot, West Side of House

Water Softener or other treatment? No water softener -

Aerator on sample point spigot? _____

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Don't know - was in when current residents moved in
Well was probably installed prior to 1950

Other Comments: Field Blank Taken here. Unusually
Slow flow rate.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Butler.

Date: 6/12/90 - Tuesday Sample Time: 10:16

Start Purge: 09:48 Est. Flow Rate: 2.5 gal in 1 min 20 sec.

End Purge: 10:16

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	10:11	7.26	610	55°F
2	10:12	7.27	610	54.5°F
3	10:13	7.27	600	54.5°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: kitchen sink faucet

Water Softener or other treatment? No Water Softener or treatment.

Aerator on sample point spigot? No.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
approx 72' deep, drilled in late 50's, 6-8" metal casing
Pump might be PVC

Other Comments: Sampled out of faucet.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Courtney/Riggs MGR 6/14

Date: 6/14 Sample Time: 9:28 30

Start Purge: 9:05 Est. Flow Rate: 1 gal / 8 seconds

End Purge: 9:28

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	9:22	7.23	428	55.5°F
2	9:24	7.24	425	55°F
3	9:25	7.26	425	55.5°F
4	926	7.25	424	55.5°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside tap on South side of house

Water Softener or other treatment? House has softener, outside tap bypasses Water Softener

Aerator on sample point spigot? _____

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

6" steel casing, Approx. 80' deep, (80' is depth of pump) Drilled around 1950,

Other Comments: Discharge of turbid, yellowish water when tap was first turned on, cleared up within 1 minute Well is visible near deck on S side of house

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Lantz / Almanza

Date: 6/14 Sample Time: 1717

Start Purge: 16:56 Est. Flow Rate: 2.5 gal in 55 sec

End Purge: 17:17

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1712	7.13	510 µmh	57.5°
2	1713	7.14	500 µmh	57°
3	1714	7.15	500 µmh	57°
4	1715	7.15	500 µmh	57°
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot, S. side of house

Water Softener or other treatment? Norwalk softener - small filter inside house but not in line with outside spigot

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well was probably drilled 30-40 years ago.

Other Comments: Well is located inside basement

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: [redacted] Samplers: Butler / Mathis

Date: 6/13/90 Sample Time: 16:00

Start Purge: 15:44 Est. Flow Rate: 1 gallon in 35 seconds

End Purge: 15:59

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1555	5.44	510	66°F
2	1556	5.64	500	65°F
3	1557	5.73	490	64°F
4	1559	5.81	490	64°F
5				
6				
7				

7 8 1 6 5

4 15 44 59

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot north side of home

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Robin Nielsen / Bob Hanna

Date: 6/12/90 Sample Time: 1445

Start Purge: 14:27 Est. Flow Rate: 1 quart at 6 seconds

End Purge: 14:37

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	14:38	7.48	570	60
2	14:39	6.99	580	60
3	14:41	6.99	580	60
4	14:42	7.00	580	60
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: North side out side spigot

Water Softener or other treatment? yes but not hooked up

Aerator on sample point spigot? None

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) N/A

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Cantz / Alvarez

Date: 6/18 Sample Time: 1600

Start Purge: 1543 Est. Flow Rate: 2.5 gal / 40 sec.

End Purge: 1559

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1554	7.15	877	62.0°F
2	1555	7.09	865	61.3°F
3	1557	7.09	863	61.0°F
4	1557	7.09	860	60.7°F
5	1558	7.09	860	60.5°F.
6	1559	7.09	859	60.5°F
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: kitchen Sink

Water Softener or other treatment? No Water Softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is probably 25 years old, 2" steel pipe + piping is all steel.

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name: [redacted] Samplers: Lantz / Rys

Date: 6/14 Sample Time: 1800

Start Purge: 17:38 Est. Flow Rate: 1gal in 30 sec

End Purge: 17:57

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1754	7.12	540	52°F
2	1755	7.12	530	56
3	1756	7.12	530	55
4	1757	7.11	530	55
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot east side of house

Water Softener or other treatment? No Water Softener or filter

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Well was drilled after residents moved here - at least since 1970.

Other Comments: Well pit is visible northeast side of house
House next door (1730) is connected to same well.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N [redacted] Samplers: Lauer / Butler

Date: 6/11/90 Sample Time: 7:08

Start Purge: 18b:38 Est. Flow Rate: 2.5 gallons in 40 sec

End Purge: 7:08

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	6:58	6.98	~~100~~ 610	58°F
2	7:01	7.01	610	54.5°F
3	7:03	7.01	610 pmb	54.5°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Kitchen Sink — bypasses softener.

Water Softener or other treatment? Has water softener but sample point bypasses softener.

Aerator on sample point spigot? Taken off for purge & sample

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is 65 to 85' deep - drilled approx 10 years ago PVC pipe goes into the well.

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Na[redacted] Samplers: Robin Norton / Scott Hodge

Date: 6/12/90 Sample Time: 10:30

Start Purge: 9:53 Est. Flow Rate: 1 gallon in 30 seconds

End Purge: 10:03

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	10:09	7.14	500	59° F
2	10:11	7.41	(cut) 600	60° F
3	10:14	7.47	600	60°F
4	10:16	7.49	600	60°F
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: outside spigot on west side of home

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is at least 30 years old. Well casing is steel w/ PVC liner.

Other Comments: Spigot located very close to the ground among a bed of plants the owner calls "Snow on the Mountains". Owner sometimes sprays them w/ weed killer.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Nam[redacted] Samplers: Norton / Butler

Date: 6/18/90 Sample Time: 18:29

Start Purge: 18:14 Est. Flow Rate: 1 gallon - 48 seconds

End Purge: 18:27

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	18:24	7.37	510	60
2	18:25	7.22	510	59
3	18:27	7.18	500	59
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot north side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Resident had no information

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Almanza / Hodge

Date: 6-17-90 Sample Time: 1233

Start Purge: 1203 Est. Flow Rate: 2.5 gal / 42 sec.

End Purge: 1232

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1226	7.06	900 µmho	71.4°
2	1228	7.08	853 µmho	66.8°
3	1229	7.10	842 µmho	65.5°
4	1230	7.10	817 µmho	63.9°
5	1231	7.09	811 µmho	63.1°
6	1232	7.09	812 µmho	63.5°
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Spigot on N. Side of House.

Water Softener or other treatment? None

Aerator on sample point spigot? NO

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

25 Ft Deep, ~ 1935-40,

Other Comments: Duplicate sample collected here

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Butler

Date: 6/12 Sample Time: 17:10

Start Purge: 16:50 Est. Flow Rate: 7.5 gal in 60 sec

End Purge: 17:10

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1705	6.65	810	58.5°F
2	1707	6.64	810	58°F
3	1709	6.64	810	58°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: kitchen sink

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

well was probably drilled pre-1950. No other details known

Other Comments: well is located in basement

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Name [redacted] Samplers: Norton / Butler

Date: 6/18/90 Sample Time: 12:29

Start Purge: 12:16 Est. Flow Rate: 1 gallon 57 secs

End Purge: 12:28

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1226	7.12	650	62°F
2	1227	7.23	650	60°F
3	1228	7.24	650	60° F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot north side of house

Water Softener or other treatment? No.

Aerator on sample point spigot? No.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) The well is ± 12 yrs old ; ± 75 ft deep Resident had no other information

Other Comments: Alterations for 843 Roosevelt Conduit running from well cap was black & plastic (pvc?).

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Horton / Butler

Date: 6/15/90 Sample Time: 17:05

Start Purge: 16:51 Est. Flow Rate: 1 gallon 35 seconds

End Purge: 17:04

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	17:01	7.57	400	60
2	17:02	7.68	400	60
3	17:04	7.77	400	61
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot West side of House

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Resident doesn't have any information about the well

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Norton / Butler

Date: 6/18/96 Sample Time: 11:40

Start Purge: 11:27 Est. Flow Rate: 1 gallon is 60 seconds.

End Purge: 11:39

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	11:37	7.68	410	65
2	11:38	7.71	410	63.5
3	11:39	7.70	400	64
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outdoor spigot southwest side of house.

Water Softener or other treatment? Don't know.

Aerator on sample point spigot? No.

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Resident didn't speak english.

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted]

Samplers: Lantz / Blagat

Date: 6/17

Sample Time: 1725

Start Purge: 1702

Est. Flow Rate: 2.5 gal in 35 sec

End Purge: 1722

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1717	7.91	700 µmhos	59°F
2	1718	7.90	680	58
3	1719	7.89	680	57
4	1720	7.89	670	57
5	1721	7.89	670	57
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot on Northwest side of House

Water Softener or other treatment? No water Softener

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Resident doesn't know details of well construction

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Norton / Butler

Date: 6/13/98 Sample Time: 13:46

Start Purge: 13:34 Est. Flow Rate: 1 gal in 9 seconds

End Purge: 13:46

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	13:44	6.02	730	62°F
2	13:45	5.95	700	61°F
3	13:46	6.07	700	60°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Kitchen spigot

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: As water was being purged, a rusty coloring was noted;

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Na[redacted] Samplers: Lau + Z / Butler

Date: 6/12 Sample Time: 17:54

Start Purge: 17:35 Est. Flow Rate: 2.5 gal in 55 sec

End Purge: 17:54

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1749	7.10	610	57°F
2	1751	7.12	605	56°F
3	1752	7.13	610	56°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: outside spigot on SW side of house

Water Softener or other treatment? No Water softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

House is ~50 years old. No other details known.

Other Comments: Alternate for 1920 Sandy Hollow, which is vacant

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's: [redacted] Samplers: Bob Hank / Robin Nixon

Date: 8/12/98 Sample Time: 15:09

Start Purge: 14.52 Est. Flow Rate: 1 gallon in 25 seconds

End Purge: 15:02

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	15:02	7.50	600	64
2	15:03	7.32	600	64
3	15:05	7.35	605	64
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Spigot east side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Lantz / Alvarez

Date: 6/18 Sample Time: _____

Start Purge: ~~1828~~ RL 1837 Est. Flow Rate: 2.5 gal in ~~2 min~~ RL 49 sec

End Purge: 1859

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1855	7.12	629	59.0°F
2	1856	7.11	624	58.8°F
3	1857	7.11	623	58.6°F
4	1858	7.12	622	58.3°F
5	1859	7.12	623	58.3°F
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot east side of house

Water Softener or other treatment? No Water Softener

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Resident does not know details of well construction —
Well is 6" steel casing, old pipes to house are steel.

Other Comments: Bluish crusty material on spigot - Brushed off to the extent possible. Well is located in basement
Field Blank taken here.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Na[redacted] Samplers: Norton / Butler

Date: 6/14/90 Sample Time: 1710

Start Purge: ~~5:57~~ RN 16:57 Est. Flow Rate: 1 quart in 10 sec

End Purge: 17:09

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1707	4.88	740	59°F
2	1708	4.84	720	60°F
3	1709	4.64	720	59°F
4	____	____	____	____
5	____	____	____	____
6	____	____	____	____
7	____	____	____	____

59
.01
2 9

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot east side of house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Bob Hink / Robin Norton

Date: 6/12/90 Sample Time: 17:50

Start Purge: 17:38 Est. Flow Rate: 1 qt in 17 seconds

End Purge: 17:50

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	17:48	7.40	625	61 °F
2	17:49	7.26	620	61
3	17:50	7.30	630	61
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot on south side house.

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Wells 65-70 feet deep.

Other Comments:

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident: [redacted] Samplers: Brother/Hodge

Date: 6/19/90 Sample Time: 1:40

Start Purge: 1:25 Est. Flow Rate: 2.5 gal in 2 min 5 sec.

End Purge: 1:40

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1:35	7.12	797	63.6°F
2	1:36	7.10	778	61.3°F
3	1:37	7.11	764	60.7°F
4	1:38	7.11	769	60.5°F
5	1:39	7.11	767	60.4°F
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: in-house faucet

Water Softener or other treatment? no

Aerator on sample point spigot? no

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) about 40 ft; well been here at least 40 years;

Other Comments: Resident says water was sampled about 3 years ago and that they are in process of hooking him up to city water;

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Lantz / Almanza

Date: 6/15 Sample Time: 1225

Start Purge: 12:01 Est. Flow Rate: 2.5 gal in 20 sec

End Purge: 1221

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1216	7.27	400 µMho	56°
2	1217	7.31	400 µMho	56°
3	1219	7.32	390 µMho	56°
4	1220	7.32	390 µMho	56°
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Spigot near crawlspace in back (west side of House.

Water Softener or other treatment? No Water softener at this location.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: Well is located between 3133 and 3135 Sewell, but is used by all 3 houses. Purge water smells like Sulfur.

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's _____ Samplers: Robin Wanner / Scott Hoefle

Date: ~~6/12/90~~ 6/12/90 Sample Time: 11:36 am

Start Purge: 11:9 Est. Flow Rate: 1 gallon / 57 seconds

End Purge: 11:29

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	11:30	7.93	700	70
2	11:31	7.98	660	65
3	11:33	7.99	640	64
4	11:34	8.~~7~~ (4)	640	64
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: ~~Kitchen~~ spigot

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: _____

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's Na[redacted] Samplers: Horton / Butler

Date: 6/18/06 Sample Time: 12:53

Start Purge: 12:38 Est. Flow Rate: 1 gallon 53 sec

End Purge: 12 52

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	12:48	7.22	590	60.5
2	12:50	7.28	600	59.5
3	12:51	7.30	610	59.5
4	12:52	7.32	610	60
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside spigot west side of house

Water Softener or other treatment? Yes, but water softner not hooked up to outdoor spigot.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) Resident has no information about the well

Other Comments:

Southeast Rockford Sample Collection Sheet

Industrial Well – Estwing Manufacturing

Address: [redacted] Sample No: _____

Resident's N[redacted] Samplers: Lantz / Almange

Date: 6/18 Sample Time: 1425

Start Purge: 1358 Est. Flow Rate: 2.5 gal in 15 sec

End Purge: 1423

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1414	7.00	929	63.8°F
2	1415	7.01	925	62.7°F
3	1416	7.02	917	61.8°F
4	1417	7.02	914	61.4°F
5	1418	7.02	913	61.6°F
6	1419	7.02	914	61.5°F
7	1420	7.02	913	61.1°F

Temp measurements altered by proximity to heat treatment machinery.

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Tap near middle of west side of plant. Right next to well

Water Softener or other treatment? No water treatment

Aerator on sample point spigot? No Water Softener – water is not for potable use

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is 82' deep – drilled in 1940's, pumps approx. 1500 gal per day. 8" Steel casing – Water is at 40'

Other Comments: Water is process water – cooling & Quenching Estwing makes hammers

Southeast Rockford Sample Collection Sheet

Rockford Cylinder Gas

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Almanza

Date: 6/18 Sample Time: 1215

Start Purge: 1137 Est. Flow Rate: 1 liter in 30 sec - Sin fa

End Purge: 1212 1 liter in 25 sec - 2nd fau

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1201	~~7.10~~ 7.07	975	66.9°F
2	1204	7.08	967	66.6°F
3	1205	7.08	964	66.4°F
4	1206	7.09	962	66.3°F
5	1206	7.09	963	66.4°F
6	1210	7.09	980	66.4°F
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Faucet in Women's Bathroom

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point spigot? _____

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Employee doesn't know details of well construction

Other Comments: Purge through 2 bathroom faucets.

Southeast Rockford Sample Collection Sheet

Tussing Tile & Flooring

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Butler

Date: 6/11/90 Sample Time: 17:34

Start Purge: ~~17~~:00 Est. Flow Rate: 32 oz in 10 sec.

End Purge: ~~5~~17:34

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	17:22	7.01	730	58° F
2	17:29	6.95	750	59° F
3	17:33	7.00	730	59°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Sample taken from sample spigot right outside ~35 gal pressure tank.

Water Softener or other treatment? No filters, water softeners, etc.

Aerator on sample point spigot? _____

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: Well is in basement - well purged by running upstairs bathroom sink full force* Location is a commercial establishment that sells floor tiling. Well turns on periodically Matrix Spike Duplicate taken here Samples collected from brass faucet. *Purge measured here

Southeast Rockford Sample Collection Sheet

Smith Auto Repair

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Lantz / Butler

Date: 6/12/90 Sample Time: 2-5 gal in 1 min 20 sec

Start Purge: 10.51 Est. Flow Rate: 11 27

End Purge: 11:27

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	11:18	7.26	610	58.5°F
2	11:19	7.26	610	58.6°F
3	11:20	7.28	610	58°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Sink on southeast side of shop.

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

30-35' deep, 2" metal pipe - grounded well himself

Other Comments: House next door - 3017 S. 11th is on same well, House is vacant now. Field Blank taken here. shop smells like hydraulic fluid - doesn't smell of gasoline or solvents.

Southeast Rockford Sample Collection Sheet

Goodyear Tire Co.

Address: 3119. 11th St. Sample No: _____

Resident's Name: Bill Czerny - Mgr Samplers: Lantz / Butler

Date: 6/12/90 Sample Time: 12:33

Start Purge: 12:09 Est. Flow Rate: 2.5 gallons in 19 sec

End Purge: 12:33

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	12:26	7.32	420	57°F
2	12:29	7.33	420	56.5°F
3	12:31	7.33	420	56.5°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Outside Brass Spigot on NW corner of bldg.

Water Softener or other treatment? No treatment, No Water softener

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is approx 4 years old - Shop Mgr doesn't know details of well construction

Other Comments: Shop smells like tires, Sample point is next to 3 anti freeze drums - Not leaking, no odors

* Alot of small, black particles were noted in water - No municipal water

Southeast Rockford Sample Collection Sheet

Mc Donalds

Address: 3237 11th Sample No: _____

Resident's Name: Dave Steuberg Samplers: Lantz / Alvarez

Date: 6/14 Sample Time: 1545

Start Purge: 1525 Est. Flow Rate: 2.5 gal in 15 sec

End Purge: 1531 END 1545

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1541	7.22	560	56° F
2	1543	7.28	580	55.5° F
3	1544	7.28	560	55°
4	1545	7.28	560	55°
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Back Stainless Steel Sink

Water Softener or other treatment? No Water Softener or treatment

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Restaurant Manager doesn't know details of well.

Other Comments:

Southeast Rockford Sample Collection Sheet

Pizza Hut

Address: 3329 11th Sample No: _____

Resident's Name: Jan Hershey Samplers: Lantz / Almanza

Date: 6/14 Sample Time: 1615

Start Purge: 1557 Est. Flow Rate: 2.5 gal in 21 sec.

End Purge: 1609

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1604	7.09	600	57°F
2	1605	7.09	600	56°F
3	1606	7.09	600	56°F
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Spigot in Wood Shed on north side of bldg

Water Softener or other treatment? Yes, but sample point bypasses softener.

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Manager doesn't know well construction details

Other Comments: Tested softened water - conductivity = 700 umhos, out of hose conductivity = 610 umhos. Sample collected directly from ~~Faucet~~ Spigot. RL

Southeast Rockford Sample Collection Sheet

East Rockford Collision Center

Address: 2602 S. 17th St Sample No: _____

Resident's Name: Russell Veronica Samplers: Lantz / Rys

Date: 6/13 Sample Time: 10:02

Start Purge: 9:26 Est. Flow Rate: 2.5 gal in 35 sec. (2 faucets running at the same rate.)

End Purge: 10:02

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	0942	7.10	61.0	57°F
2 (L)	0945	7.24	~~93~~ low	55°F
3 (L)	0948	7.26	~~93~~ low	55°F
4 (2)	0951	7.26	~~93~~ low	55°F
5 (L)	0955	7.29	60	56°F
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Sink in bathroom on ~~Northeast side~~ East center of Shop

Water Softener or other treatment? No water softener or other treatment

Aerator on sample point spigot? ~~Yes~~ No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)
Well is probably 90 feet deep, drilled pre-1965
6" metal casing

Other Comments: Workers drink bottled water
Strong solvent smell in shop area
Field Blank taken here

Southeast Rockford Sample Collection Sheet

Address: [redacted] Sample No: _____

Resident's [redacted] Samplers: Bridle/Hodge

Date: 6/19/90 Sample Time: 10:28

Start Purge: ~~10:26~~ — Est. Flow Rate: —

End Purge: —

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	10:29	7.02	649	60.7°F
2	10:30	7.17	625	58.7°F
3	10:31	7.20	622	58.2°F
4	10:31	7.20	620	57.8°F
5	10:32	7.20	615	58.0°F
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: South end of playground —

Water Softener or other treatment? no —

Aerator on sample point spigot? no —

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) industrial well; shallow well (214 ft. finished in limestone; stainless steel screen) 2,450 gpm; drilled 1971; ceased phosphate injection 9-89

Other Comments: call Mike Falzone before 3:30 for further info — (815) 785-1269
In past, had injected phosphate into well; find out many gallons pumped per day to reduce oxidization time
didn't need to purge because no holding tank - water coming straight from well

Southeast Rockford Sample Collection Sheet

Kincaides Service

Address: 1101 Brooke Sample No: _____

Resident's Name: Robert McCutcheon Samplers: Lantz / Almanza

Date: 6/18 Sample Time: 1650

Start Purge: 1624 Est. Flow Rate: 2.5 gal in 45 sec

End Purge: 1648

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1643	7.00	539	60.4°F
2	1644	7.08	530	59.2°F
3	1645	7.09	527	58.8°F
4	1646	7.10	526	58.7°F
5	1647	7.10	526	58.7°F
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Inside tap on east side of garage

Water Softener or other treatment? No Water Softener

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Manager doesn't know details of well construction

Other Comments: Well is located in empty lot south of Station

Southeast Rockford Sample Collection Sheet

Corcoran's Body Shop

Address: 3109 Collins Sample No: _____

Resident's Name: Dave Corcoran Samplers: Lantz / Bhagat

Date: 6/15 Sample Time: 1135

Start Purge: 1113 Est. Flow Rate: 2.5 gal in 13 sec (outside hose)

End Purge: 1134

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1130	7.43	495 umho	57°F
2	1131	7.43	495	57
3	1132	7.44	491	57
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Bathroom sink in shop area

Water Softener or other treatment? No water softener in house, but bathroom sink in the shop area bypasses softener.

Aerator on sample point spigot? NO

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well is 90 feet, 5" steel casing — well is riser pipe is 2" PVC well was drilled approx 1985, Depth to water = 50-60 feet.

Other Comments: Sampled inside because of heavy rain Ran both bathroom sink and outside faucet to get adequate purge Sink purge rate = 1 liter in 10 sec

Southeast Rockford Sample Collection Sheet

Industrial Well
Commonwealth Edison

Address: 123 Energy Drive Sample No: _____

Resident's Name: Craig Reed Samplers: Lantz/Almanza

Date: 6-14-90 Sample Time: 14:45

Start Purge: 10:20 Est. Flow Rate: 2 x 2.5 gal in 40 sec

End Purge: 14:42

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	1437	7.35	590 µmoh	58°
2	1438	7.33	590 µmoh	57°
3	1439	7.31	590 µmoh	57°
4	1440	7.30	590 µmoh	57°
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Bathroom Sink in Dealer's Maintenance Bldg

Water Softener or other treatment? No treatment

Aerator on sample point spigot? No - removed

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.) _____

Other Comments: well is located behind building SE of head in road running near the two huge diesel tanks
send results to Craig Reed
Commonwealth Edison
123 Energy Dr.
Rockford IL 60109

Industrial Well

Southeast Rockford Sample Collection Sheet

Address: 707 HARRISON Sample No: _____

Resident's Name: ROCKFORD PRODUCTS ~~Ray~~ ROY MORRIS Samplers: LANTZ / BHAGAT

Date: 6-19-90 Sample Time: ~~11~~ 1420 - 1440.

Start Purge: Purged 11 gallons Est. Flow Rate: _____

End Purge: _____ → ~~Well pumped continuously~~ Well pumps 24 hrs/day ~~on a~~ on a 60 sec on 60 sec off cycle.

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.	
1	1408	7.30	710 ~~mmhos~~	57°F	7 gal
2	1411	7.15	700	57.5	8
3	1414	7.33	700	57	10
4	1417	7.35	710	57	11
5	____	____	____	____	
6	____	____	____	____	
7	____	____	____	____	

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: No 2 well in Heat treatment Area.

Water Softener or other treatment? None

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc.)

Well screened at 150 - 180 feet, pumps 750 gpm continuously
8" diameter steel casing

Other Comments: Field Blank + Duplicate taken here.
Lots of Oil & grease in vicinity of sample point.

Southeast Rockford Sample Collection Sheet

Rock River Reclamation District

Address: 3333 Kishwaukee Sample No: _____

Resident's Name: Mr Richard Eick Samplers: Horton / Butler

Date: 6/18/90. Sample Time: 14:26

Start Purge: 14:14 Est. Flow Rate: pump rate = 1000 gallon per second. sample rate = ~~60~~ 1 gal in 65 seconds

End Purge: 14:26

Stabilization Parameters:

Trial	Time	pH	Conductivity	Temp.
1	14:24	7.31	600	60
2	14:25	7.24	590	60
3	14:26	7.21	590	59
4				
5				
6				
7				

Purge is adequate if three consecutive readings fall within these ranges:
pH = ± 0.25, conductivity = ± 50 µmhos/cm, and temp. = ± 0.5 °C (±2°F).

Comments:

Location of sample point: Industrial well #2 - pump house

Water Softener or other treatment? No

Aerator on sample point spigot? No

Well Construction: (depth, PVC, stainless, date drilled, static water level, etc. ~~Well~~ 215 ft deep below ~~ground~~ surface; 15 yrs old; static water level 14 ft below surface; draw down is 12 feet

Other Comments: They have 2 dewatering wells & 2 potable water wells. We sampled well #2

APPENDIX B

FIELD NOTEBOOKS

SOUTHEAST ROCKFORD

FIELD NOTEBOOK #1

JUNE 1990

SE Rockford Project

Sample Team 1

Property of Rik Lantz

Camp Dresser & McKee

Address 200 W. Adams Ste 1600

Chicago IL 60606

Telephone (312) 786-1313

Project # 1681

This Book is manufactured of a High Grade 50% Rag Ledger Paper having a Water Resistant Surface, and is sewed with Nylon Waterproof Thread.

INDEX

Trailer # 399-8303

6/11/96 Monday

9:30 Arrive at Trailer, set up
10:00 Calibrate pH & Conductivity meters
Conductivity meter used by Sample team I calibrated at 8750 umhos in 12,000 umho solution

---

1:55 1735 Hamilton
- Purge begins 13:56
- Sample Location
  - SE corner of house
  - outside spigot

2:25 1735 Hamilton Sample collected

2:35 Arrive at 1737 Johnson
- 2:35 – Begin purge
- Sample location – SW corner of house
- Outside spigot
- duplicate will be collected here –
- 2:52 end purge

3:05 Sample collected at 1737 Johnson
3:45 Preparing to take sample water Field Blank at 1617 Lyman.

16:50	Arrive at 508 Rock River Ave.
1715	508 Rock River Sample Collected.
~~17:54~~	~~End Purge RL~~
17:30	Arrive at 1812 Sandy Hollow
17:35	Begin Purge
17:54	End Purge
18:00	Sample 1812 Sandy Hollow Collected
18:05	stopped at 2619 Lindberg - Not Home
18:10	Arrive at 2406 Lindale
18:16	Begin Purge
18:39	End Purge, recieve advice regarding squirrels
18:50	Leave 2406 Lindale, Sample collected Lots of small bubbles in purge water, but none in VOC samples.
19:00	Stopped at 3141 S 17th. Harold Couch says well was recently hit by lightning and well pump was replaced on Saturday, so did not take sample.
19:10	3 samples in cooler for night 319 Sawyer, 2406 Lindale, 1812 Sandy Hollow - All 3 metals samples preserved. Cooler sealed with custody seal

Number 65 X 7.

19:30 Leave trailer for Hotel

Mt. Fair

96/12/90

6/13/90 Wed.

8:00 Meter 00128 calibrated at 97c in 1000 micro/cm fluid

8:15 Break custody seal on cooler containing 3 samples from last night.

0917 1st stop: Church of God at suspected location: 2602 S. 19th No one here - will have to come back on Sunday?

0925 2nd stop 2602 S. 17th at E. Locke Collision Center. Spoke w/ Russ Verona (owner)
- Sample point: bathroom sink on NW side
- No H_2O filter or softener
- using bottled water
- purge rate: 35cc/2.5gal
START purge: 09:28 am

10:02 End purge

10:10 Sample 2602 17th St. collected.

10:15 Field Blank at 2602 17th collected.

10:31 Stopped at 2713 20th: Vacant and over-run

1035 Arrived at 3109 20th
START purge: 10:36

10:55 End Purge

11:00 Sample 3109 20th collected.

1134: Arrived at 2315 Harrison

1136: START purge (Victory Typ)

1145: Duplicate Sample taken at 2315 Har

11:57: End purge

1200 Sampled well at 2315 Harrison + Duplicate.

12:15 Stopped at 3110 S. 18th. No one home.

12:20 Stopped at 3120 17th

12:22 START purge 12:40 End Purge

1232 Talked with owner

1245 Sample collected at 3120 S 17th just prior to start of Thunderstorm

14:08: Stopped at 2619 Lindsay No one home!

14:20 Arrive at 3102 16th

14:22 Began Purge

14:41 End Purge

14:45 Sample 3102 16th St. Collected.

14:50 Arrive at 3122 16th St.

14:56 Start Purge.

15:11 Purge interrupted & STARTED AT 15:11

6/13/90 Wow

1524	END Purge
1605	Stopped at 2801 Collins
1608	started purge
1626	END purge
1632	Sample collected Along w/ matrix spike Duplicate
1645	Arrived 3245 Collins Talked to owner: John Bruford
1649	START purge
17:09	End Purge.
17:15	Sample 3245 Collins collected
17:30	Stopped at 2619 Lindberg - Not Home
1730	Arrived A 2619
1737	started Purge
17:57	End Purge. Residents daughter arrived as we were pulling out.
18:05	Arrive at 3110 18th
18:10	Begin Purge - Will collect field blank here.
1831	END PURGE
1831	SAMPLING WELL from spigot
1842	WATER WAS ~~REDDISH~~ bubbly
1845	Sample 3110 18th collected, Return to trailer.

19:15 samples 3245 Collins, 2810 8th, 3110 18th, 3110 18th Field Blank, 3110 10th, 3110 10th Dup, 2619 Lindberg sealed in Cooler. Custody Seal Number 6531.

19:25 Pack up and leave ~~Eaton~~ Trailer. Thank You.

6/13/90

6/14/90

4:00 Arrive at trailer, Scott H is calibrating instruments.

4:10 Break custody seal on cooler. Virginia Wood witnesses.

4:30 00928 calibration 950 in 1000 buffer calibration fluid. pH meter calibrated ok.

900 stopped at 3135 HORN: resident says well is on same system as 3131 & 3133 ! NOT SAMPLED

901 stopped at 3125 MARSHALL DID NOT obtain access to well, said well was checked previously & was NOT interested in having it sampled

905 3106 MARSHALL

907 ~~start purge~~ (From faucet)

908 START PURGE

928 End purge. Switched faucets because each faucet was closer to well.

930 Sample TAKEN (3106 MARSHALL)

939 3134 sewell : stopped & no adult present - will return at later time

923 1737 Fenley : stopped but no one

6/14/90

was home

946 : stopped at 1726 Fenley & no one was home

952 stopped at 3215 11th & no such number exists.

958 : stopped at McDonalds Assigned to 3215 & talked w/ store mgr will return to sample at later time.

1013 : stopped at 3229 Green Hall - mgr was not in so will return at later time

1018: stopped by 3329 Lopez

1021: START purge

1033: END purge & sampled 3329 Lopez

11:00 Return to trailer

1114: ARRIVED AT 3230 Lopez, talked w/ owner Russel Brown

1117 START purge

1130 EXTRACTED Field Blanks

1141 Sample 3230 Lopez Collected. Field Blank also collected at 3230 Lopez.

1150 stopped at 3213 Lopez - Not Home.

11:55 Stopped at 3137 Lapey, water main valve curbed in front of house so went across to 3138 Lapey and no one home - went to 3134 Lapey & once again no one is home!!

1204 Stopped @ 3013 Lapey no one home!

1210 Stopped @ 2826 10th & no one home!!

1210-1240 Made address map.

1550 Arrive at Comm Ed to take Industrial well sample. Spoke w. James Freeman

14:20 Start Purge

14:42 End purge

14:45 Comm Ed - 123 Energy Dr. sample collected.

14:55 Stopped at 2800 Falcon Sheridan Trucking. Couldn't verify that sample point by passed softener, so tested conductivity of water known to be softened - 1100 umhos - same as purge water from spigot which is supposed to bypass softener. Because of doubt, no sample taken.

15:30 Arrive at McDonald's - 3237 11th

15:31 Begin Purge

15:41 End Purge

15:45 Sample collected 3237 11th

1550 Arrive at Pizza Hut - 3317 11th

1551 Begin purge - Question about water softener bypass - will test with conductivity meter on at last one.

1609 End Purge

1615 Sample 3329 11th collected, Return to trailer.

1640 Arrive at 3137 Marshall

1643 Start Purge -

1644 No water - check faucet in basement

1656 Start Purge again

1717 End Purge

1720 Sample 3137 Marshall collected.

733 Stopped at 3137 Small & no one is home

1738: START purge at 1726 Pershing.

1756: End purge.

1800 Sampled Well 1776 Pershing

1811 Stopped at 3139 Sewell St. NW
on Phone

1814 Stopped at 1637 Pershing

1816 START purge

1837 End Purge

1840 Sample 1637 Pershing

1915 Samples 1776 Pershing, 1637 Pershing, 3110 Sewer, 3137 Marshall 1317 Brooke, 2624 5th, 3115 7th, 3237 11th, 1702 Brooke, 3329 11th sealed in cooler - custody seal 6538.

1975 Leave ~~cooler~~ trailer for Hotel.

6/14/90

6/15/90 Friday

8:00 Arrive at trailer, break seal on cooler with last night's samples to over samples.

8:30 Calibrating meters - Conductivity meter 00928 calibrated at 810 umhos on 1000 umho Std

9:30 Leave to make address map

11 9:15 Arrive at 3129 Horton

11 9:18 Begin Purge. Will collect drip here

11 9:42 End Purge

11:52 Sample 3129 Horton + Dup collected

Note: Because of position of faucet, we could only fill metals bottles 1/2 full, so we used a third metals bottle to fill the ~~remainder~~ VOC remainder. 3rd bottle was then discarded.

12:00 Stopped at 3137 Sewell yet again parents are not home. Went next door to 3135 1/2 Sewell

12:01 Began purge

1:24 End Purge

1230 Sample 3135 1/2 Sewell collected, Head back to Trailer.

1:00	Lunch
1:50	Arrive 3213 Lapsey
1:57	Start Purge
2:10	Field Blank collected at 3213 Lapsey
14:20	End Purge
14:25	Collected Sample 3213 Lapsey
14:40	Stopped at 3137 Lapsey - Not Home
14:45	Stopped at 3101 Lapsey - Not Home
14:50	Stopped at 3013 Lapsey - Not Home
14:55	~~Stopped~~ Arrive at 1713 Harrison — Begin Purge.
15:20	End Purge.
15:25	Sample 1713 Harrison Collected
15:50	Stopped at 1817 Harrison - Not Home
16:00	Worker at 2607 Marshall says site used to be a dump for Foundary & other local industries
16:10	Walked up and down 2600 block of Sewell and Marshall - No water wells on this block
16:15	Stopped at ~~2406~~ 2646 Sewell - Luther Jackson says well doesn't work - will try again later ~~next~~ next week often he has a chance to get a plumber to fix the well.
14:30	Stopped at 2703 30th for appointment Not home
14:35	Stopped at 3101 Lapsey - Not Home
14:40	Stopped at 3137 Lapsey - New resident says that they have contact up to city water.
14:45	Stopped 3138 Lapsey
14:46	Begin purge.
1713	End Purge
1715	Sample 3138 Lapsey Collected
1740	Closed Cooler with samples from 728 South Hollow and 3138 Lapsey Custody seal Number 6545

6-15-90

Cheryl Maxey

6/16

8:00 Arrive at trailer, Break down and seal up cooler with yesterday's samples.

8:30 Calibrate Conductivity meter, 00728 - 9530 umhos in 10,000 calibration fluid.

9:30 Stopped at 2622 19th - Church of God - Not Home

9:35 Stopped at 2703 ~~19~~ 20th - Not Hom

9:40 Steady rain since ~~8 a.~~ 0800

9:45 Stopped at 1817 Harrison. Not home.

9:50 Stopped at 2635 10th St on city water.

9:52 Stopped at 2626 10th St. Not home.

9:55 Stopped at 3101 Copley

9:58 Begin Purge

10:21 End Purge

10:25 Sample 3101 Copley Collected.

10:55 Stopped at 3102 9th - Not Home

11:00 Stopped at 3101 9th - Not home.

11:05 Stopped at 2927 9th - City ~~Hall~~

11:10 Stopped at 2910 9th - Already Sampled but not marked on map

11:10 Arrive at 3109 Collins - Corcoran Auto Body.

11:13 Begin Purge.

11:34 End purge.

11:35 Sample 3101 Collins collected.

11:45 Arrive 3126 Collins

11:53 Start purge

12:13 End purge

12:15 Sample 3126 Collins Collected.

12:40 Lunch.

13:30 Stop at 2703 20th - Not home still raining steadily

13:40 Stop at Assembly of God church No one home 2622 19th.

13:45 Stop at 1817 Harrison - Not Home

14:05 Stop at 3138 8th - Not Home.

14:10 Arrive at 3122 Bildahl

14:15 Begin Purge - Dup will be taken here

14:36 End Purge

14:45 Sample 3122 Bildahl + Dup collected here

15:00 Arrive at 3206 Bildahl.

~~15:05 Begin SB~~

15:05 Begin purge

15:26 End purge

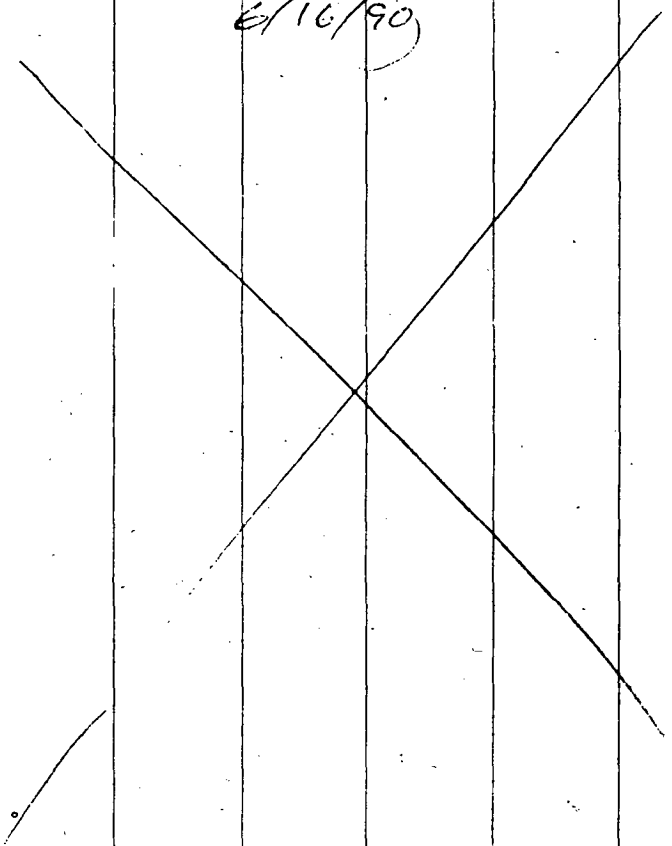
~~15:30 Sample 3206 B SB~~

1530 Sample 3206 Bildahl and Matrix Spike taken.

1545 Return to trailer for sample packaging

1645 Leave trailer for Hotel(s).

~~Hilton~~
6/16/90



6/17/90 Sunday

8:30 Arrive at trailer, discuss days activities.

9:00 Begin making address map.

11:10 Return to trailer, calibrate instruments. Conductivity meter 00928 reads 9800 in 1000 umho calibration fluid. pH meter OK.

11:30 Stop at 1817 Harrison - Not home.

1135 Stopped at 2703 20th - Not home.

1150 Stopped at 3102 9th St. - Not Home

1155 Stopped at 3101 9th.

1157 Began purge.

1223 End Purge

1225 Sample 3101 9th Collected

1240 Stopped at 2622 S 19th - NOT home.

1250 Stopped at 2009 9th St - Resident claims they are on city water

1255 Arrive at 3022 8th

1258 Begin Purge

1322 End Purge

1325 Sample 3022 8th Collected

1400 Lunch

1445 Arrive at 3138 8th

1446 Begin purge

1500 Field blank taken at 3138 8th.

End Purge 1512
1515 Sample 3138 8th Collected
1525 Arrive at 3109 8th.
1526 Begin purge.
1551 End purge.
1555 Sample 3109 8th taken
1603 Arrive at 2703 20th.
1605 Begin purge
1628 End purge.
1630 Sample 2703 20th collected
1700 Arrive at 1202 Sandy Hollow
1702 Start Purge
1722 End Purge
1725 Sample 1202 Sandy Hollow collected
1740 Stopped at Church of God - ON City Water according to pastor
1745 Stop at 1817 Harrison - Not Home
1805 Return to trailer.
1815 Samples 1202 Sandy Hollow, 3101 9th, 3107 Grant Park Blvd, 3022 8th, ~~(3109 9th)~~ 110 Brooks, 3117 River Blvd + Dup, 2703 20th, 3138 8th + Field Blank sealed in two coolers with ICE & ice. Custody Seals 6554 &

6555 used to seal coolers.
1820 Correction: 3109 9th should be 3101 9th. Broke custody seal on cooler to make sure bottles are labeled properly - they are. Resealed with custody seal 6556.
1825 Leave for night.

~~Mark Law~~
6/12/90

6/18/90

800 Break custody seal on two sample coolers. Calibrate instruments. Conductivity meter 00928 reads 900 umhos in 1000 calibration fluid. Note: Sample cooler for organics also contained Trip Blank, but blank was not labeled. pH meter calibrated.

850 Begin making address map

1030 Stop at 2613 #11 St - Employees don't know where well is - will stop back

1050 Stop at 1817 Harrison - Not home again - will take sample.

1053 Begin purge ——

1118 End Purge ——

1125 Sample 1817 Harrison + Matrix Spike Sample taken here.

1135 Arrive at 2613 11th.

1137 Begin purge. ——

1212 End Purge ——

Problems with stabilization, but readings fall within prescribed ranges, so will take sample.

1215 Sample 2613 11th collected.

1310 Arrive at Estwing, meet with Paul Devers

1358 Begin Purge ——

1423 End Purge ——

1425 Sample collected. Sample was collected right next to heat treatment machinery - May have caused difficulty with temperature stabilization. 2647 8th - Industrial Well.

1515 Stopped at 1001 Harrison - on city water

1525 Stopped at 2713 Wisconsin - Pigeon Club - Not Home, but neighbor has well.

1540 Arrive at 608 New Milford

1543 Begin purge ——

1559 End Purge ——

1600 Sample 608 New Milford. ——

1615 Stopped at B/H auto 2929 8th, Facility at 914 Brooke has no well, but we could get a sample at 2929 8th

1620 Stop at Kincade's Service at 1101 Brooke. ——

1624 Begin Purge
1648 End Purge
1650 Sample 1101 Brooke collected
1700 Return to trailer, discuss sample points
1745 Stop at 2624 9th - No such Number
1800 Stop at 3007 7th City Water
3012 7th - City Water, 3008 7th not home, but neighbor at 3010 says they're on city water
1815 Stopped at 3330 7th - Not Home
1820 Stopped at 3011 Sauer - Not Home Across street at 3014 Sauer they have well so we will take Sample
1828 Begin Purge - will take field blank here
1837 Begin Purge again - Hose was kinked
1845 Field Blank collected @ 3014 Sauer
1859 End Purge
1900 Collect 3014 Sauer
1915 Stopped at 805 Barnum - City Water
1920 Stopped at 3037 Kishwaukee - Check water softener bypass - Plumbing looks like outside spigot can bypass water softener with shutoff valve - Check TDS (conductivity) of tap water vs. outside spigot. Tap water is higher by 150 umhos, so OK to sample
1925 Begin purge
1950 End Purge
1955 Sample 3037 Kishwaukee collected
2010 Samples 3014 Sauer + Field Blank, 3037 Kishwaukee, 3110 River Blvd 621 Kannon, 1101 Brooke, 608 New Milford sealed in Cooler. Custody Seal 13272
2025 Leave trailer for day

Thy Ford
6/18/90

6/19/90 Tues

800 Arrive at trailer - Custody seal on cooler intact.

825 Begin Address Maps.

945 Return to trailer - Calibrate instruments for Municipal well samples. Pam & Robin will sample

1000 Prepare to discuss sampling points w. Dave.

1130 Dave Dollins arrives at trailer - Discuss 39 points where we do not have samples yet.

1215 Leave trailer for lunch.

1300 Return to trailer.

1325 Arrive at ~~Ken~~ Rockford Products

1345 Arrive at site of pump - No way to purge sample point - can't discharge water, and any hose would be in pathway of fork lifts. will purge several outlets. Pump runs continuously 24 hrs per day 7 days per week! Address - 707 Harrison. Flow rate on pump is 750 gal/minute according to Ray Norris, plant facility manager - Will take field blank here.

1350 Field Blank taken at 707 Harrison.

1420-1440 Collected Rockford Products (707 Harrison) + Dup. Lots of difficulties - Couldn't purge via hose, so purged 11 gals with bucket. Lots of tiny bubbles in water - couldn't get VOC sample without bubbles - too much back pressure. small bubbles in all VOCs (total of 8 VOC bottles) well is situated next to heat treat area, so very hot. Lots of oil & grease around sample spigot and immediate area - Changed gloves after.

1452 Arrive at 2717 20th — abandoned house for past eleven (11) years according to neighbor at 2711 20th. Has well, but not working, (electrical wiring 2711 20th has City water. unhooked)

1502 Stopped at 2646 Sewell — previously sampled by Butler/Hodge.

1515 Return to trailer.

1550 - After talking with DD - Head to Collins to see if we can take

additional samples.
Check Non-respondents to survey:

	2818	City Water
	2825	City Water
	2831	City Water
	2833	City Water
	2841	Not Home
	2905	City Water
	2907	City Water (according to neighbor)
	2917	Not Home
	2935	City Water
1735		Stopped at 2917 Collins - City Water
		Stopped at 2841 Collins - Not Home
1740		Arrive at 505 Barnum
1743		Begin Purge
1803		End Purge
1805		Sample ~~60~~ 505 Barnum collected
1810		Stopped at 401 Sawyer - Not Home
		406 Sawyer - City Water
		407 Sawyer - City Water
		418 Sawyer - City Water
		412 Sawyer - City Water
1820		~~4~~ RL 505 Sawyer - Not Home
1825		Stopped at 3324 7th - City Water
		3325 is a vacant house

with which is for sale
1830 Stopped at 3337 7th - City Water
1840 Seal Sample 505 Barnum in cooler with Custody seals 1003 and 1004.
1845 Talk about Samples with Dave - D.D. says we've covered the territory, Go Home.

~~Rick Lau~~
6/19/90

6/20/90 (Wed)

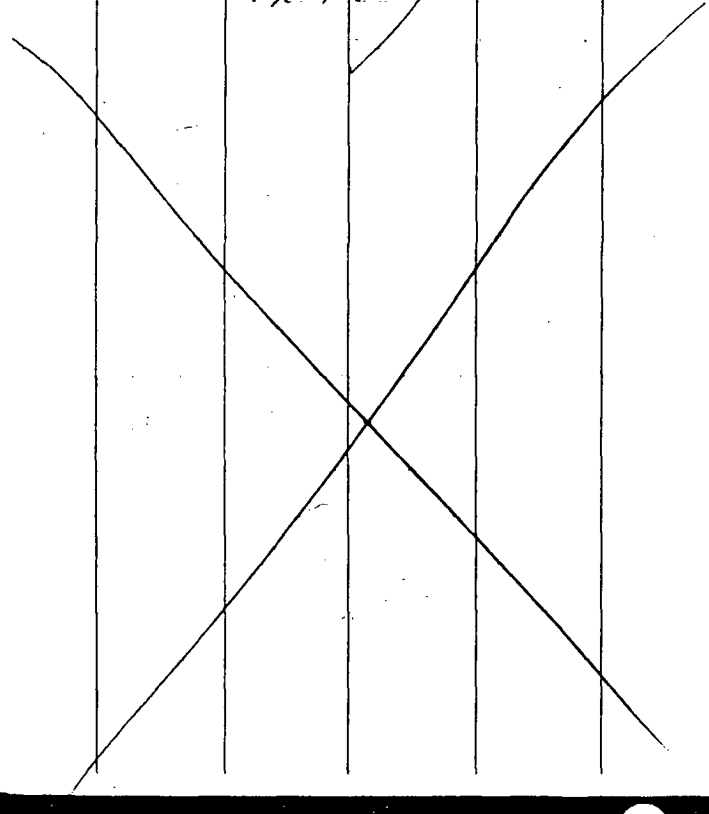
800 Arrive at trails, begin packing up trails.

915 Stopped at 505 Sawyer – city water

930 Begin Mapping

1230 Conclude Mapping – Check Trails, leave site.

Mike Todd
6/20/90



SOUTHEAST ROCKFORD

FIELD NOTEBOOK #2

JUNE 1990

Sample Team 2

Property of Bob Hunt CDM
Camp Dresser & McKee
Address 200 W Adams St 1600
Chicago IL 60606
Telephone 312-786-1313

project
1681-003-CG-GEAD

Trailer #
399-8303

This Book is manufactured of a High Grade 50% Rag Ledger Paper having a Water Resistant Surface, and is sewed with Nylon Waterproof Thread.

INDEX

6/11/90 Sample team Bob Henk
Robin Norton

Conductivity meter 02079
CDM

calibrated at 900

RN

pH meter 00930

RN

calibration OK

1705 Hamilton
Purge Begin at 1356
Sample Location: outside spigot
SE corner Home

RN

@ 1445
2905 Sumer
No One Home

RN

@ 1453
2819 Sumer Door not
exist
2820 Sumer Door not
exist

RN

@ 1454
2823 Sinter

RN

People are hooked up to city water

RN

@ 2820 4th Street
people are on city water

RN

@ 1505
2828 4th Street

RN

Sample taken from Kitchen water Spigot Inside

RN

Start purge @ 1509
start measurement 1511
End purge 1525

RN

Sample was taken from 3rd chair

RN

RN

1545
original Sample Site 2805 S. 4th Street does not exist

RN

1st 2817 S. 4th Street
on city water still using well for pool but could not ~~hook~~ to sample due to location in basement

RN

2nd 2819 S. 4th Street

RN

Start Purge	15:51
Outdoor location - west side of house	
End sampling	16:10

RN

Robin L Norton
6/11/90

RN

RN

6/12/90 8:00	Note: We found that 2805 S. Fourth does not fit the site as a place of business. Since an alternate was sampled, this site will not be sampled.
	Conductivity meter # 020M is calibrated at 9000.
9:53	3007 River Boulevard Begin purge 9:53 am 6/12/90. Spigot located outside on west side of home. End purge 10:03. Sample time: Begin 10:20
10:55	605 South St does not exist. Alternate: 519 ~~S~~ N South Street is one city water. No one was home at alternate 527 South St.
11:19	614 South St Begin 11:19 am for purge. End purge 11:29. Sample time 11:36.
12:15	2820 Oliver. Mrs Jones. Begin purge 12:15 End purge 12:25. Begin sampling 12:32
12:38	Across 2901 S. Fourth People at home Begin purge 12:37 End purge 12:49. Sample time 12:52 This was an alternate for 2917 S. 4th
14:10	3011 4th - Powell. Street alternate. No access. 3037 4th was on city water. 3010 was not at home 826 Brooke was not at home.
14:25	Across 827 Mattie Tomes at home. Begin purge 14:27. End purge 14:37 Sample time begins 14:45
14:52	2905 Jones. Begin purge 14:52. No one at home. End purge 15:02. Begin sampling 15:09.
15:22	409 Brooke. Debbie Gardner at home. Begin Purge 15:22 End purge 15:32 Start sampling 15:37
16:04	326 Brooke. Purge 16:06 begin. End purge 16:16. Sampling

	began 16:21.
16:42	Arrive 202 Brooke. Family at home. Took sample from kitchen. Began purge 1642 End purge 1655. Sampling begins ~~1655.~~ EN 1655.
17:38	Arrive 319 Sawyer. Began purge 17:38. End purge 17:50 Began sampling 17:50. Robert Norton 6/12/90
6/13/90	Conductivity Meter Calibration Calibration Factor 1000/990
	Appointment List:
	3337 8th Marcetta Ellenberger (Cont) ✓
(Left)	1306 Sandy Hollow Jami Devoria
	3233 7th Mary Higdon all day
	615 Sawyer - try to get it.
9:47	Arrive 3337 8th St. Marcetta Ellenberger at home. Start Purge. Pressure pump
9 EN	turned on. Had to turn water off after 3 parameter tests. Pump restarted.
9:14	End purge

9:15	Began sampling.
9:31	Arrive 3301 S. 8th St. Mrs Ebeble not at home. Began purge
9:44	End purge. Began sampling.
9:57	Arrive 3237 S. 8th. Henderson at home. Began Purge
10:15	End purge began sampling.
10:47	Arrive 3201 S 8th St. Mr Halligan at home. Began purge.
11:03	End purge. Began sampling.
11:17	Arrive 3310 Collins. Childer at home. Began purge
11:32	End purge. Began sampling.
13:34	1306 Sandy Hollow. Mrs. Devoria was at home. Began purge. Noted that the water is very rust colored - almost brown
13:46	End purg. Began sampling.
14:30	Arrive 3238 7th Street. Tornado hit area 20 minutes earlier. Began purge.

14:54 End purge. Begin sampling.
15:10 3239 Kiskiwaukee
No electricity etc. Will go back tomorrow. Need to verify that they're not on city water
15:44 Arrive 430 Martin.
No one home. Begin purge.
15:59 End purge
16:00 Begin sampling.
16:45 2825 Collins. Big dog. No go.
2822 ~~Collins~~ 8th St. - City Water
16:50 ~~16:55~~ RN Arrive 2810 S 8th People at home. Begin purge
17:07 End purge.
17:08 Begin sampling
17:40 ~~Arrive 3305 8th~~ RN
Looked for 3305 8th St.
No such address.
17:44 Arrive 3245 9th St.
Judy Bennett at home. Begin purge. We ran out of water. No electricity to run pump due to tornado. Will go back for it.
18:03 Arrive 3110 S 10th. Mr

[illegible] at home. Begin purge ~~at~~ RN Problem with pH meter. First measurement didn't register pH. End purge 18:[illegible] RN
18:21 End purge
18:22 Begin sampling
19:09 End of day
Robin L Norton

6/14/90 Calibration meter - 0207
8:30 pH meter serial number: 00931
Calibration at 940
Conductivity factor 1000/940
appointment list:
3115 7th Amaro Villalobos 3:35 - 6:30
3110 Sanir Kristy Whitman after 4:00
3009 Bildahl / Randy + Sharon John after 5:30 pm
9:04 Arrive 3309 S 7th Resident did not answer door. Begin purge.
9:22 End purge
9:23 Begin sampling
9:30 Arrive 3245 9th St. Resident at home. Begin purge. This is a second visit due

to a storm & subsequent power outage 6/13/98

9:43 End purge
9:44 Begin sampling.
9:58 Arrive 3239 Kenwaukee. Residents at home. Begin purge.
10:12 End purge
10:13 Begin sampling
10 28 Arrive 3300 Wishwaukee Begin purge. Resident at home.
10:43 End purge
10:44 Begin sampling
11:24 Arrive 2045 4th. Resident at home. Begin purge.
11:38 End purge
11:39 Begin sampling.
12:17 Arrive 3914 8th St. Resident at home. Begin ~~Purge~~ RW purge.
12:29 End purge.
12:30 Begin sampling.
14 19 Arrive 3009 Collins. Resident arrive as we began purge. Begin purge

14:34 End purge
14:35 Begin sampling
14:47 Arrive 2624 S. Fifth St. Resident not at home. Begin purge.
15:09 End purge
15:10 Begin sampling
15:51 Arrive 3165 S. 9th. Residents at home. Begin purge. There was a filter, but it was removed prior to sampling.
15:20 Arrive 1202 Brooke. Residents at home. Begin purge.
1634 End purge
1635 Begin sampling.
16:57 Arrive 3110 Sorber. Residents at home. Begin purge
17:09 End purge
17:10 Begin sampling
17:23 Arrive 1317 Brooke. Resident not at home. Begin purge
1739 End purge
1741 Begin sampling.
18:06 Arrive 3609 Bedarth

Resident is at home. Resident
are on city water, but also
have well. Will call
Jerry Brown, the landlord
at 1-393-4284 to verify.
Begin purge.

13:25 End purge.

13:34 Begin sampling

19:12 Call Mrs Jerry Brown.
She said 3002 was on city
water only, and the well
was no longer ~~drug~~ ran to look
up to the hand. Samples
were discharged.

Rebecca Horton
6/14/90

6/15/90 Calibration meter: 02079
Calibrated at 9:50 pm.
PH Meter 00930

Appointments:
3210 9th Jerry Smith Apt
3002 Kishwaukee Mr. Ahrstad 11:30
9910 9th Cockrell Condy Rickey

10:59 Arrive 10:59 3210 9th St.
Residents at home, but
father was asleep. So

said father will message
to sample. Begin purge.

11:11 End purge

11:11 Begin sampling
Father came out & gave
other info

11:26 Arrive 3002 Kishwaukee.
~~Resident~~ Owner was at
home. This location was
at one time a gas station.
Begin purge

11:39 End purge.

11:39 End sampling

12:02 Arrive 3038 Bildahl. Resident
is at home. Begin purge.

12:22 End purge

12:23 Begin sampling.

12:37 Arrive 3141 Bildahl. Resident
not at home, but letter
allowed us to sample. Begin
purge.

12:49 End purge

12:50 Begin sampling.

13:55 Arrive 9710 9th. Resident
not at home. Will sample
later.

14:00 Arrive 3122 Bildahl. Resident not at home. This was the second attempt. (Did not record earlier attempt today). Did not sample. — RR

14:05 Arrive 3206 Bildahl. Resident not at home. Did not sample

14:07 Arrive 3302 Bildahl. Resident at home. Begin purge
14:25 End purge
14:26 Begin sampling
14:45 Arrive 3338 Bildahl. Resident at home. Begin purge.
14:59 End purge
15:00 Begin sampling.
15:35 Arrive 2920 9th St. Resident at home.
15:36 Begin purge.
15:51 End purge
15:52 Begin sampling.
16:10 Arrive 3013 Lopey. Mr Burray not available. Son could not get hose unconnected. Question as to whether outside spigot hooked up to water softener. Did not sample.
16:13 Arrive 3101 Lopey. No one home. Did not sample.
16:15 Arrive 3213 Lopey. No one home. Did not sample.
16:19 Arrive 3230 Lopey. Residents at home
16:20 Begin purge
16:25 This site has been sampled already. End purge. Did not sample
16:49 Arrive 728 Arky Hollow
16:51 Begin purge.
17:04 End purge
17:05 Begin sampling.

Robert Horton
6/15/90

6-16-90

Weather - Rain, overcast & Mid-70°F.

1145 stopped at 3015 Grant Park Blvd. Resident said well is steel and installed N 1960 and is shallow

1146 Begin Purge, outside spigot on NW side of House

1156 Started Stabilation Tests

1212 end Purge

1214 Collecting Sample

1216 Collecting Field Blank Sample. Scott & Craig do paperwork in trailer for the rest of the day.

[signature]
6/16/90

6-17-90

1200 Arrived at 3117 River

1203 started purge

1232 end Purge

1233 Sample collected (DUP)

1241 Arrived at 3107 Grant Park Blvd.

1255 Started Purge

1313 End Purge

1314 Collected Sample

1414 Arrived at 106 Brooke No Body Home went Next Door to 108 Brooke No one home there-either

1420 Arrived at 110 Brooke .. 2 doors down from 106

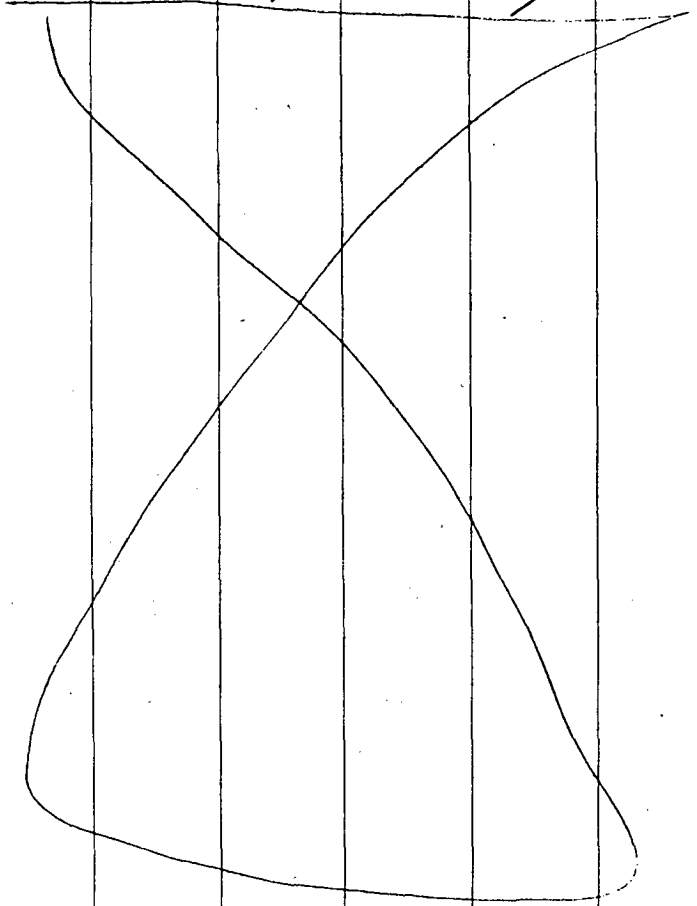
1421 Begin Purge

1439 End purge

1440 Collect Sample

1458 Arrived at 825 Barnum Terrace. Started hose on City water.

Craig A Hennig



6/13/90

Conductivity meter # 00928
Calibrated to 900 µM in 1000 calibration fluid
pH Meter # 02363

10:39 - Arrive 1630 Hamilton. Resident at home. Sample taken in the bathroom. Began purge.

10:55 End purge

10:56 Began sampling. Noted some suspended solids in water.

11:20 Arrive 810 Sandy Hollow. She is an alternate for 826 Sandy Hollow. Mrs. Valencia was at home. She doesn't speak english - spanish only. Left a note for her husband & talked to neighbor.

11:37 Began purge.

11:39 End purge

11:40 Began sampling.

12:15 Arrive 841 Woodhill. This is an alternate for

843 Prospect. Resident at home. Began purge. (N)

12:16 Began purge.

12:20 Noticed that condensate running from well cap was black plastic. (Inc.)

12:28 End purge.

12:29 Began sampling.

12:38 Arrive 804 Taft. This is an alternate for 801 Taft which does exist. 802 does not exist either. Resident home at 804 Taft. Began purge.

12:52 End purge.

12:53 Began sampling.

14:00 Arrive Rock River Redevelopment Authority. Met Mr. Richard Erickson. There are two potable wells. We will sample well #2.

14:14 Began purge.

14:25 End purge.

14:26 Began sampling.

Note: 2 drinking water potable wells in area. We sampled 1 potable well (#2).

14:50 Arrived 3325 7th for a 3:00 appt. Found that pump had been hit by lightning during storm & there was no water available. No samples were taken.

15:25 Arrive 3330 7th St. No one home. Did not sample.

15:30 Arrive 505 Barnum. This was the second attempt. First attempt was on 6/12/90. This attempt does not appear to be logged.

15:37 Arrive 604 Sawyer. No one home. This is an alternate for 611 Barnum which is on city water. No sample taken.

15:40 Arrive 604 Barnum. No one home so no sample taken. Returned for 611 Barnum.

15:47 Arrive 426 Barry.
Advised to for 415 Herron.
Resident at home. ~~Began~~ ran

15:48 Began purge

16:00 End purge

16:01 Begin sampling.

16:15 Arrive 621 Herron.
Resident at home. Began purg.

16:28 End purge

16:29 Began sampling.

18:00 Arrive 527 South St.
On city water. (W)

18:10 Arrive 3107 ~~Race~~ Pine Blvd. No one home. Did not sample

18:12 Arrive 3109 ~~Pine~~ Race Blvd. Resident refused
screen. Does not want sample.

18:13 Arrive 3110 Pine Blvd. Resident at home

18:14 Began purge.

18:27 End purge

18:29 Began sampling.

18:47 Arrive 405 Amazon.
On city water. Did not sample

18:49 Arrive 401 Amazon.
No one home.

18:51 Arrive 315 Amazon.
On city water.

18:53 Arrive 505 Amazon.
No one home. Did not sample

18:57 Arrive 809 Amazon.
No one home.

19:00 Arrive 815 Amazon
Resident sample hers or city water.

19:02 Arrive 821 Amazon
Resident sample hers on city water

19:05 Arrive 619 Fitch. No one at home.

19:08 Arrive 613 Fitch. No one at home

19:10 Arrive 505 Barmen
No one at home.

19:13 Arrive 604 Barmen
Resident sample hers on city water

19:19 Arrive 604 Amazon. Resident sample shers on city water

19:22 Arrive 805 Barmen.
No one at home.

9:36 Arrived 410 Kenron. Fat sized dog tried to bite my ankle. Did not sample.

9:32 Arrived 426 Kenron. Residents say they use city water.

10:00 End of Day
Robin L Foster

4/19/90

Calibration meter # 02255
Calibration factor:
pH meter #

10:15 2944 Bildahl. South end of the playground. Industrial Park. Need to call before 3:30 for info on well construction, etc.

~~10:20 Begin purge~~

10:28 Begin ~~Stabilizing~~ Sampling

11:15 Arrive at 3013 Lapey

11:20 Begin purge

11:~~25~~45 am End purge

11:~~35~~52 45 Begin sampling; Taking Duplicate sample here.

12:00 End sampling -

1:30 Arrive at 2646 Sawyer

1:35 Begin purge, kitchen faucet -

1:40 End purge; begin sampling

2:30 Arrive at 3017 Bildahl

2:35 Begin purge - outside spigot

2:50 Begin sampling; end purge

3:30 Arrive at 619 Fitch - city water

3:40 Arrive at 413 Fitch - no one home; neighbor says they are on city water anyway

3:45 Arrive at 805 Brannum - no one home

3:50 Arrive at 401 Sawyer - no one home

4:00 Arrive at 505 Sawyer - no one home.

4:05 Arrive at 809 Sawyer - on city water.

4:05 Arrive at 410 Kenron

4:35 Begin purge

4:12 pm Begin sampling; end purge.

2:20 Arrived at 3330 4th Ave -
No one home.

4:20 Also sampled for MSD
at this location —

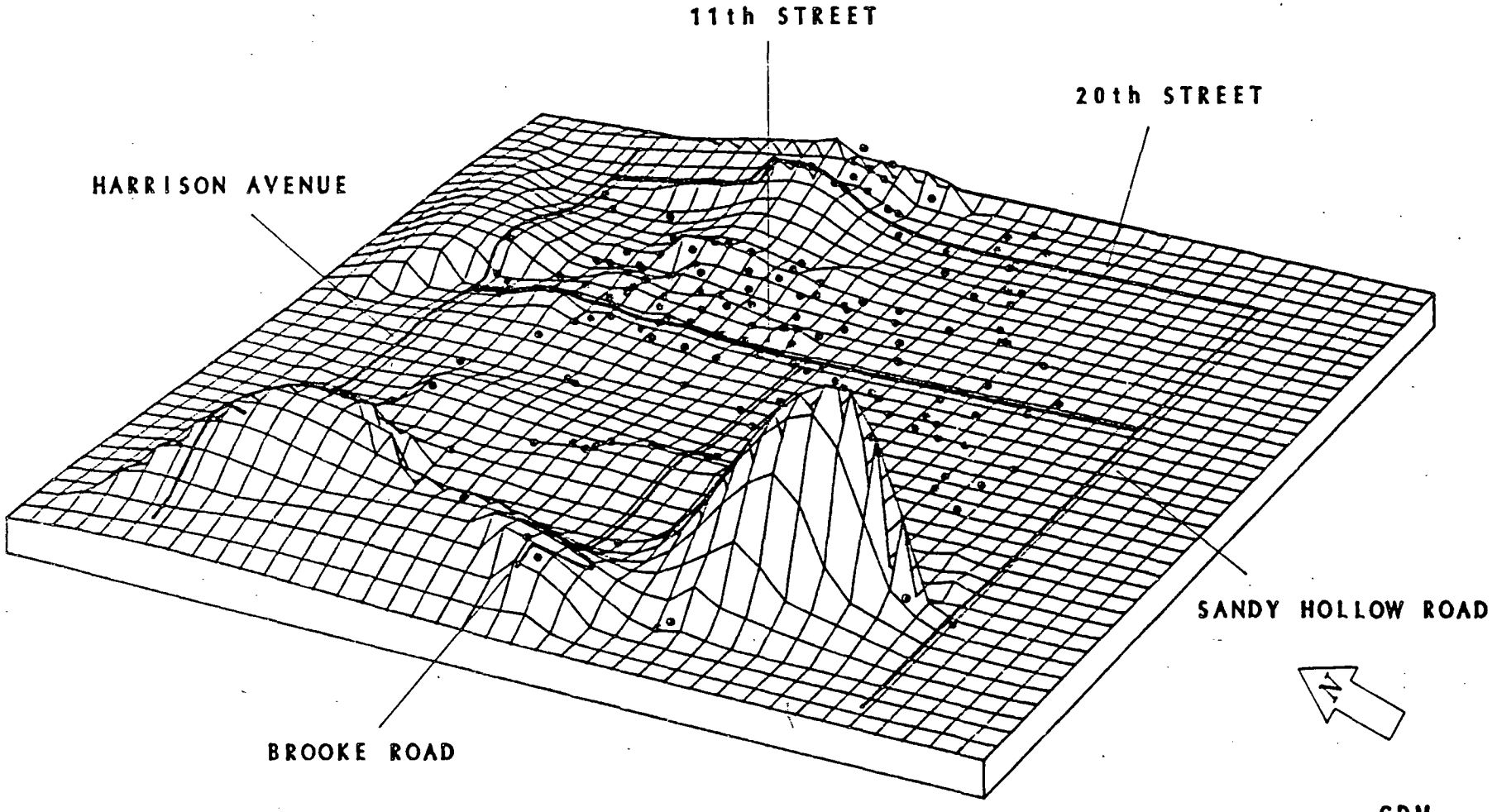
5:00 End of day
Pamela N. Prather

APPENDIX C

3-D CONTOUR PLOTS OF VOC CONTAMINANTS FOR IEPA/USEPA DATA

3-D CONTOUR PLOT OF TCE CONCENTRATIONS FOR IEPA/USEPA DATA

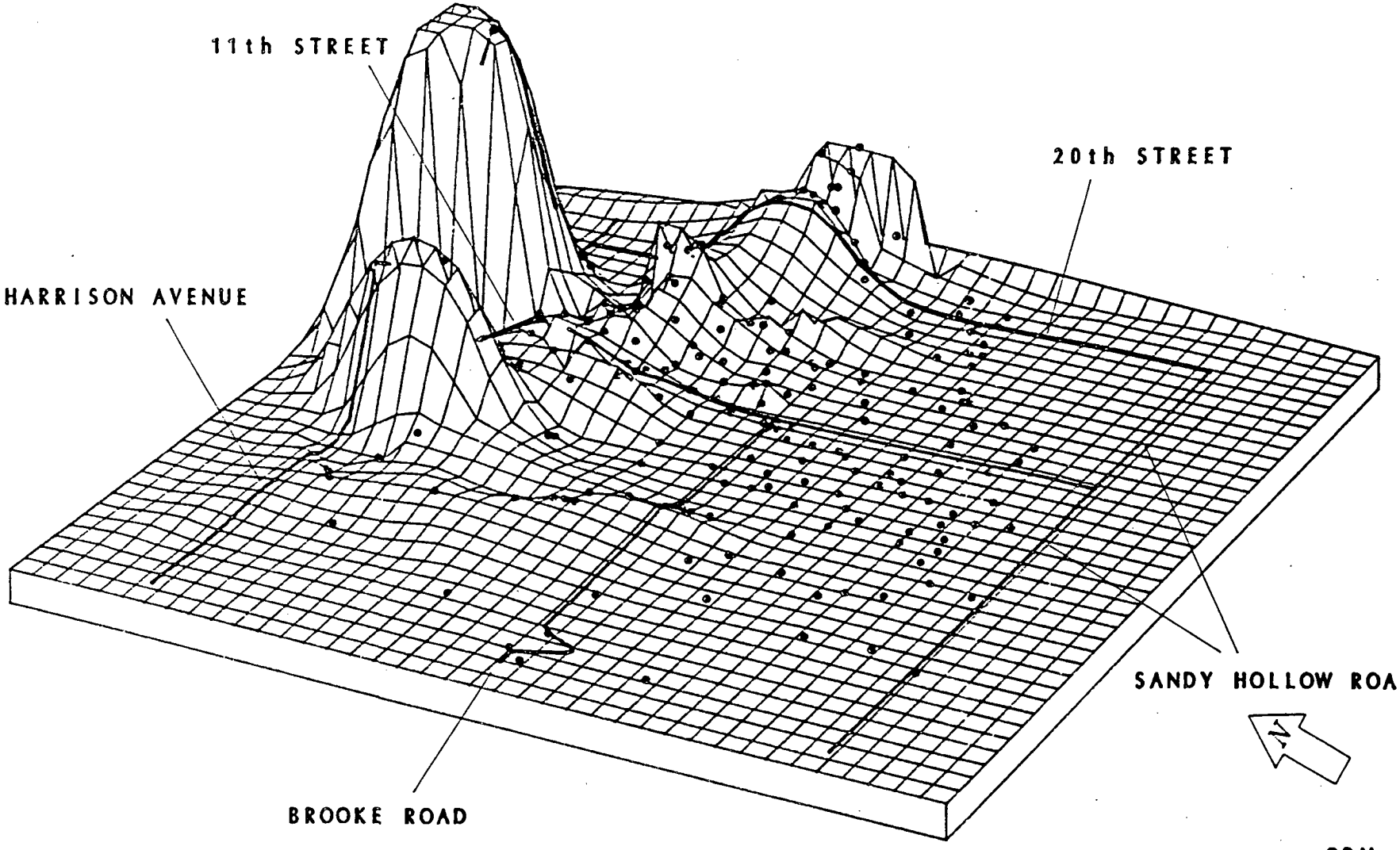
SOUTHEAST ROCKFORD PROJECT
OPERABLE UNIT



CDM
SEP.,1990

3-D CONTOUR PLOT OF 1,1,1-TCA
CONCENTRATIONS FOR
IEPA/USEPA DATA

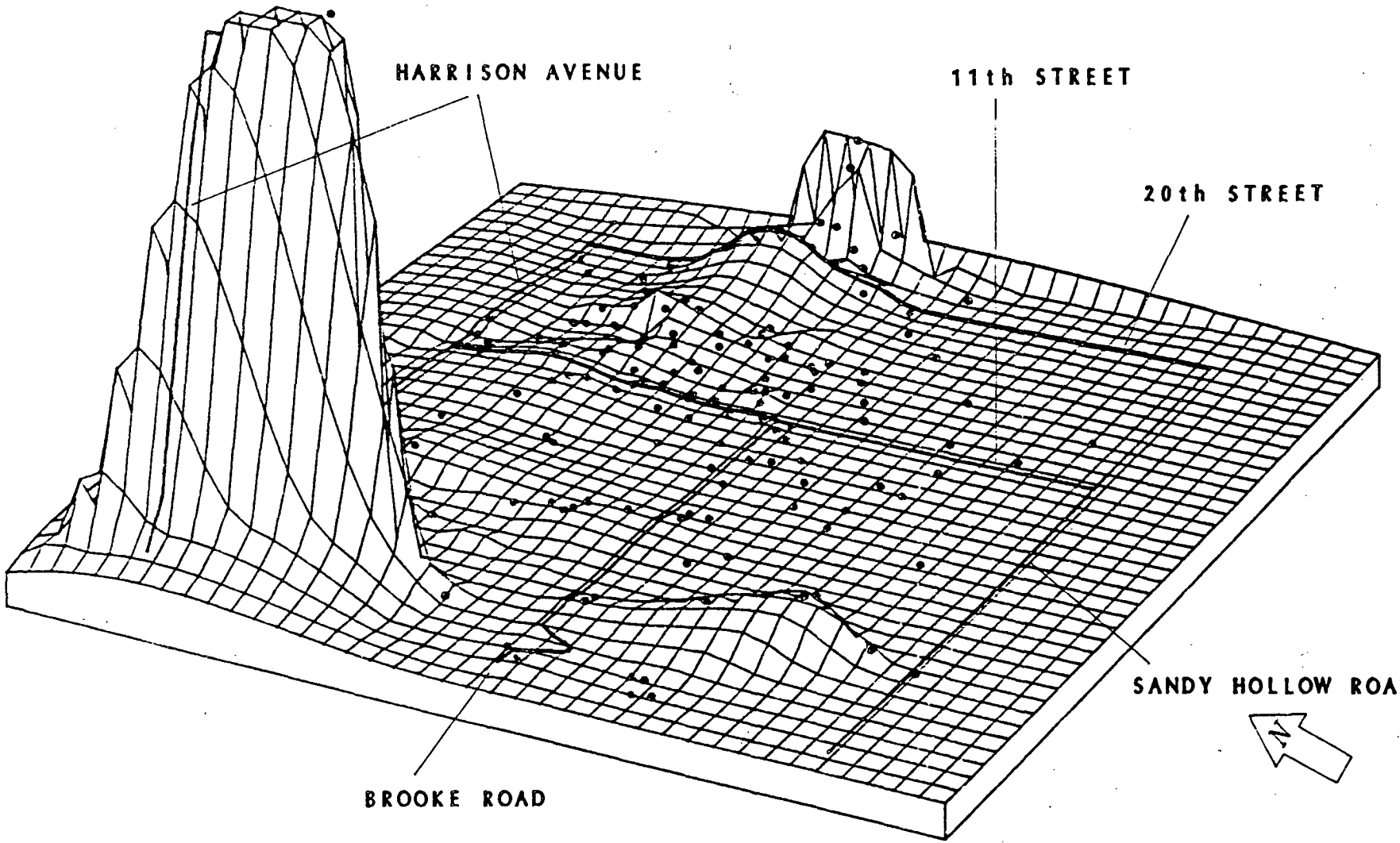
SOUTHEAST ROCKFORD PROJECT
OPERABLE UNIT



CDM
SEP.,1990

3-D CONTOUR PLOT OF cis-1,2-DCE
CONCENTRATIONS FOR
IEPA/USEPA DATA

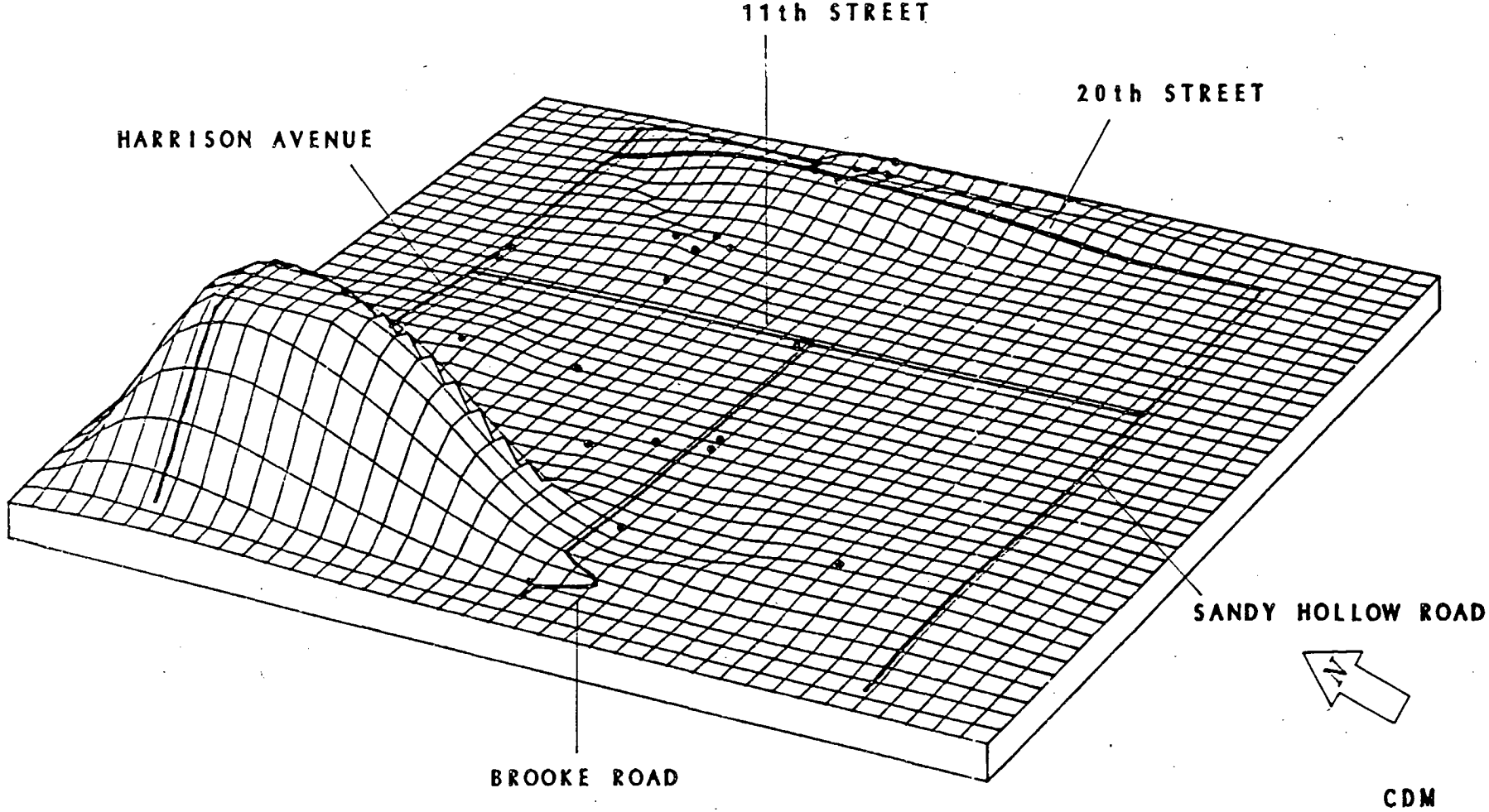
SOUTHEAST ROCKFORD PROJECT
OPERABLE UNIT



CDM
SEP.,1990

3-D CONTOUR PLOT OF trans-1,2-DCE
CONCENTRATIONS FOR
IEPA/USEPA DATA

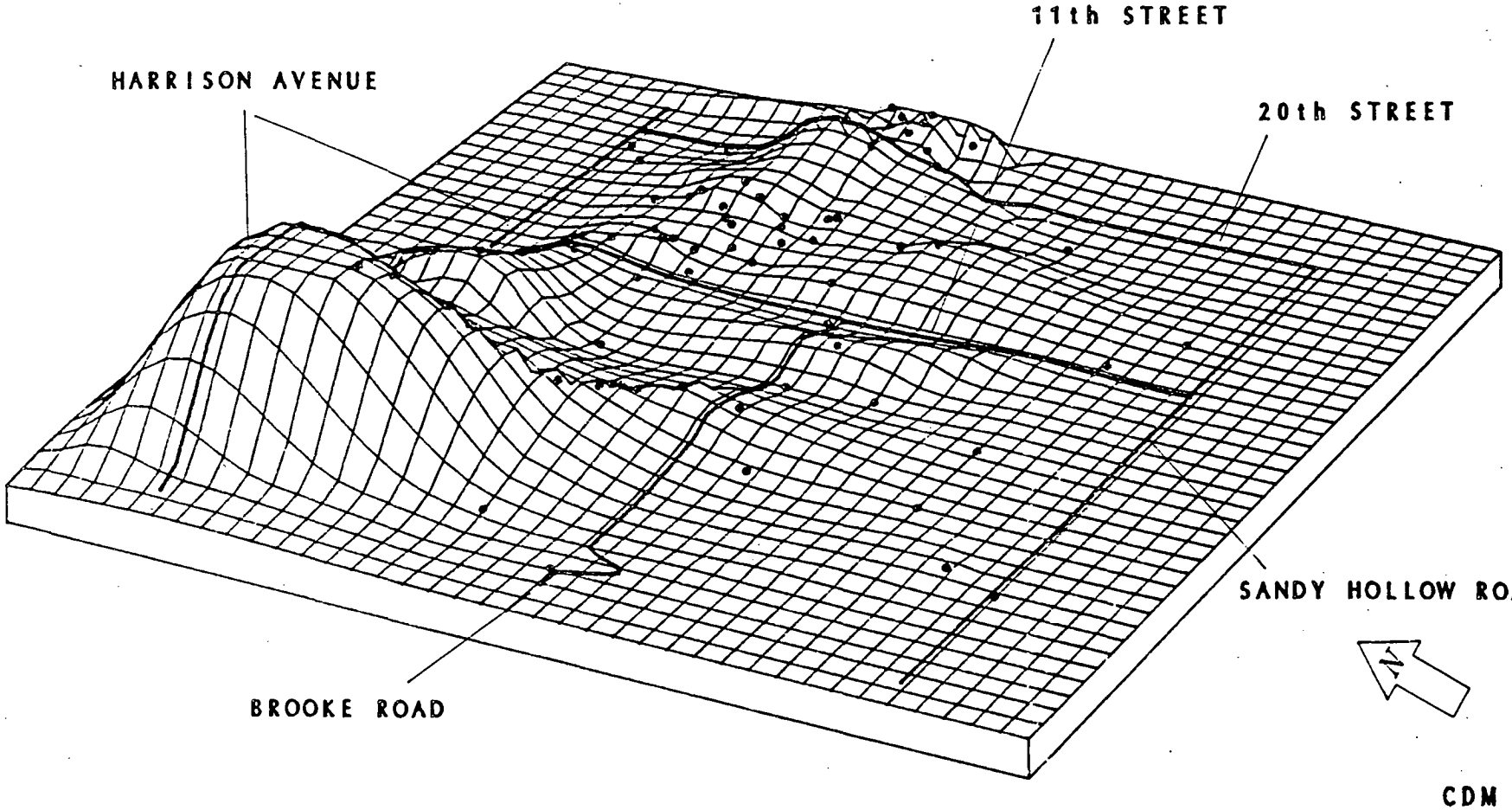
SOUTHEAST ROCKFORD PROJECT
OPERABLE UNIT



CDM
SEP.,1990

3-D CONTOUR PLOT OF 1,2-DCA
CONCENTRATIONS FOR
IEPA/USEPA DATA

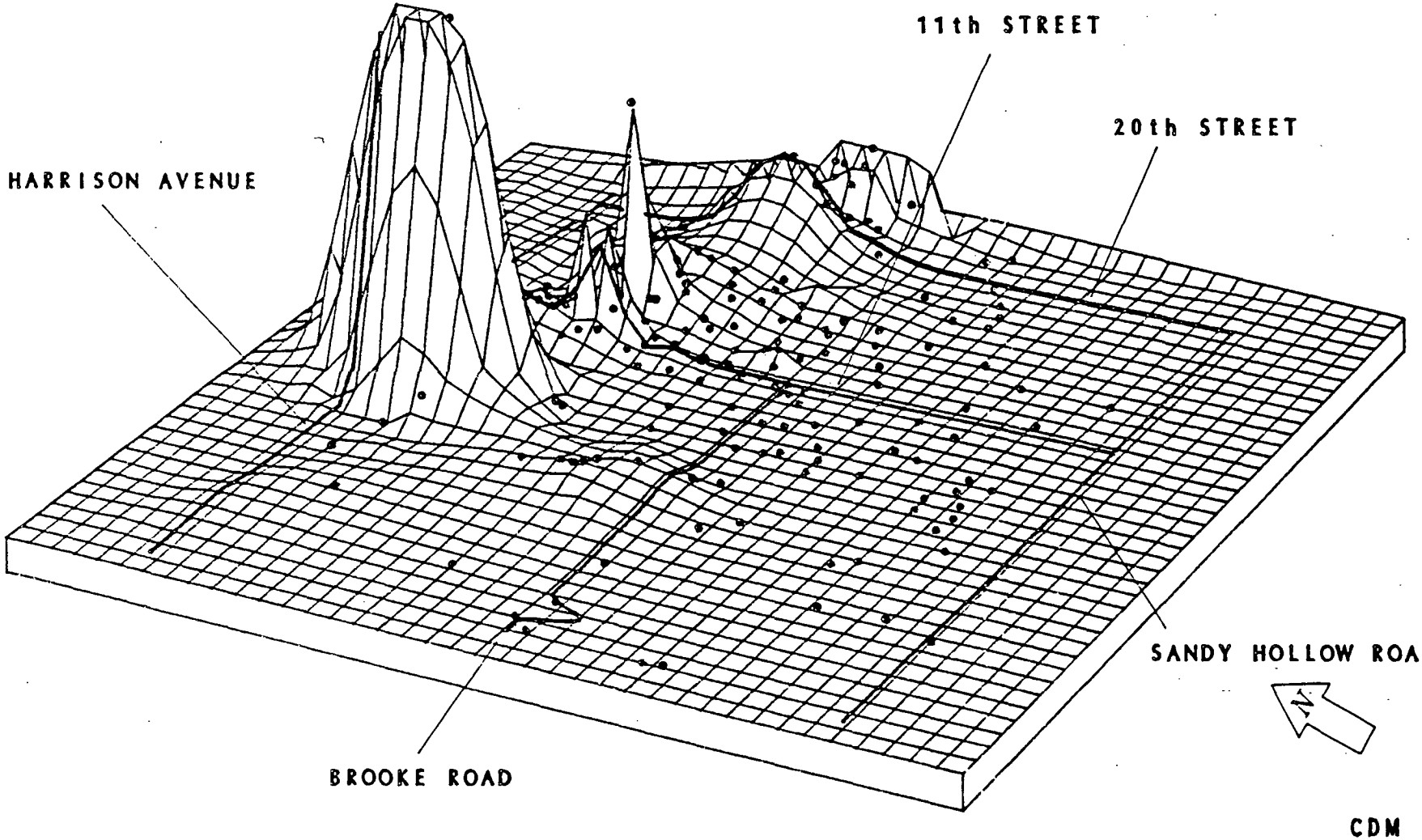
SOUTHEAST ROCKFORD PROJECT
OPERABLE UNIT



CDM
SEP.,1990

3-D CONTOUR PLOT OF 1,1-DCA CONCENTRATIONS FOR IEPA/USEPA DATA

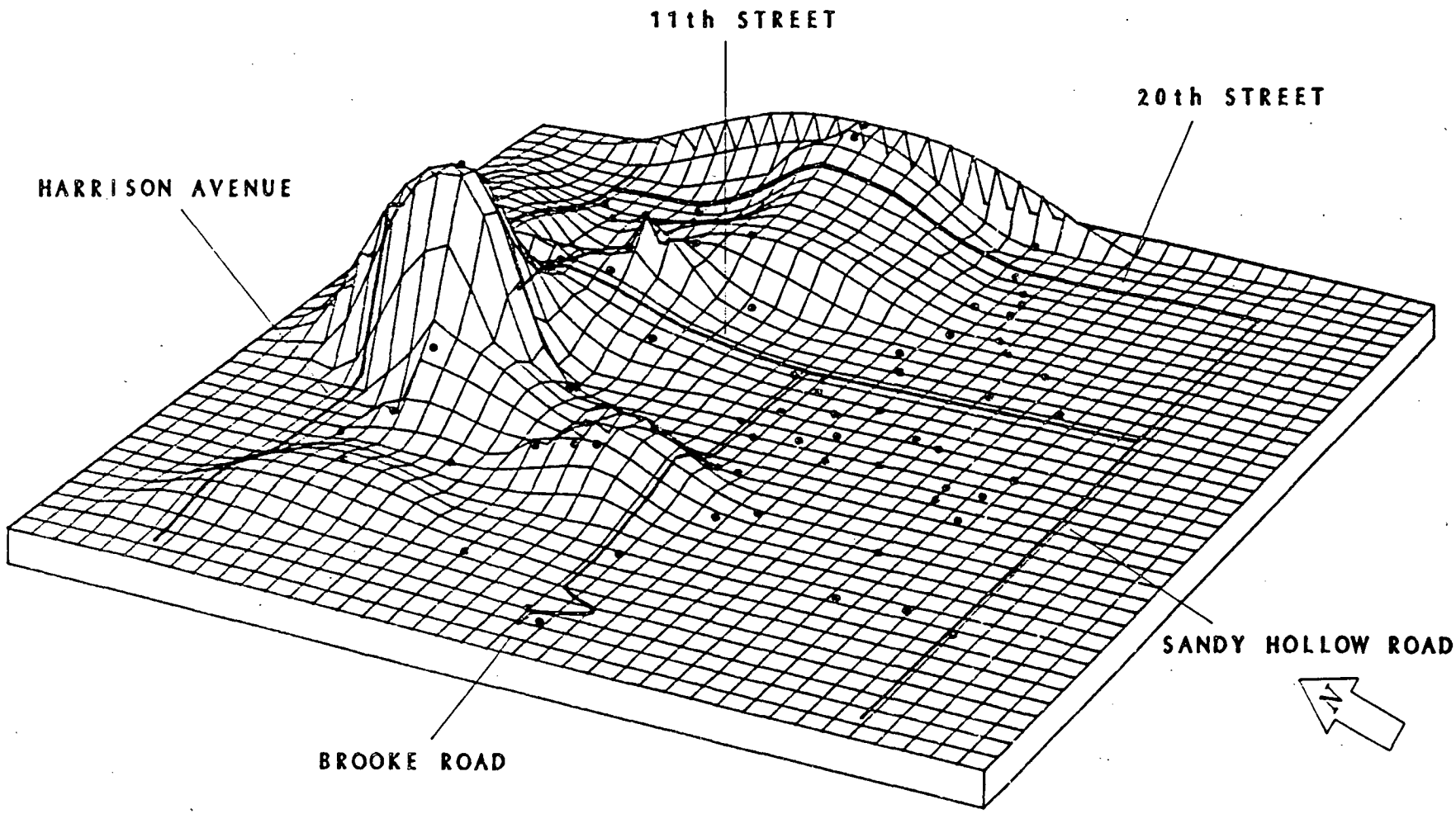
SOUTHEAST ROCKFORD PROJECT OPERABLE UNIT



CDM
SEP.,1990

3-D CONTOUR PLOT OF 1,1-DCE
CONCENTRATIONS FOR
IEPA/USEPA DATA

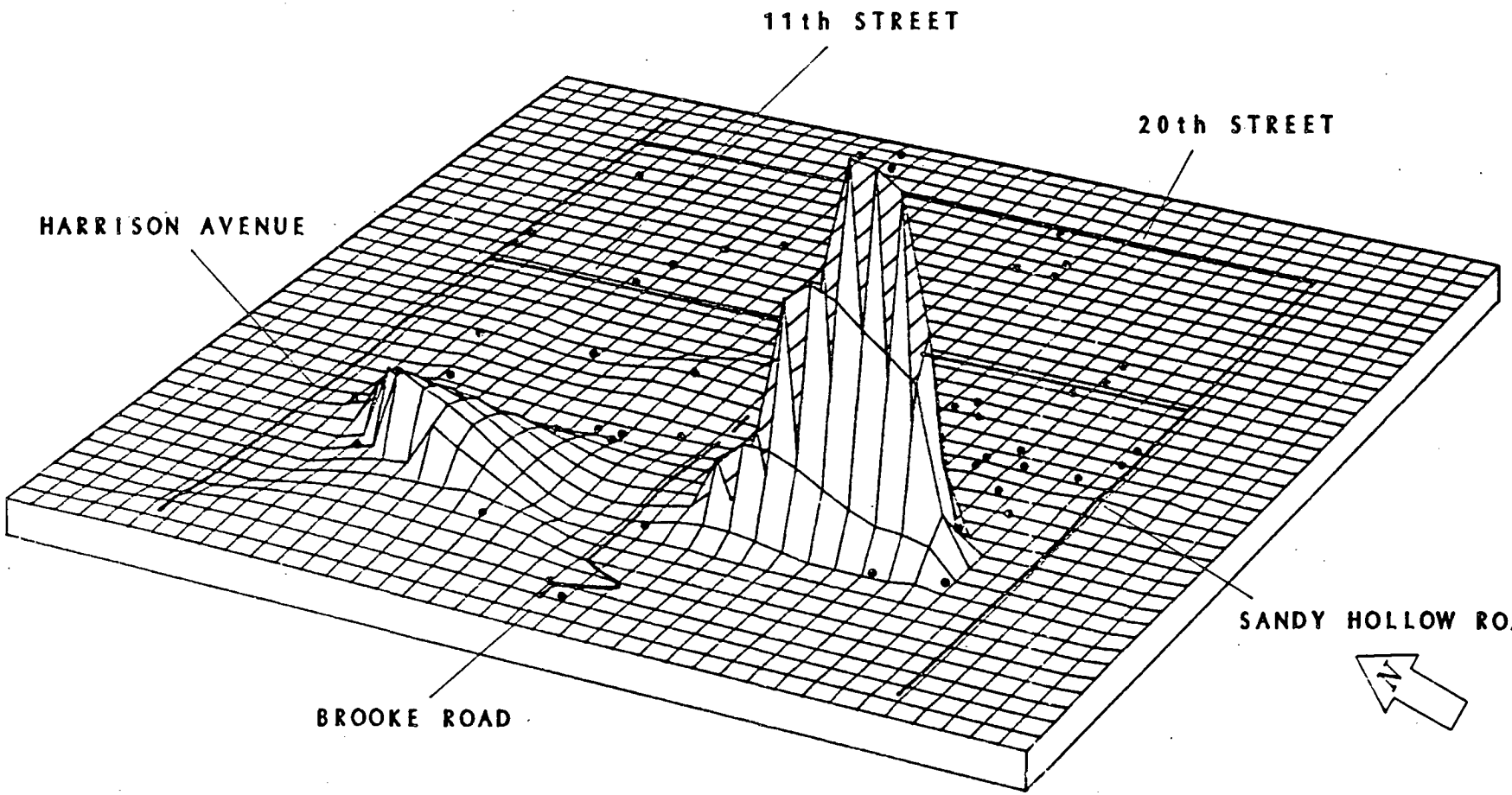
SOUTHEAST ROCKFORD PROJECT
OPERABLE UNIT



CDM
SEP.,1990

3-D CONTOUR PLOT OF PCE CONCENTRATIONS FOR IEPA/USEPA DATA

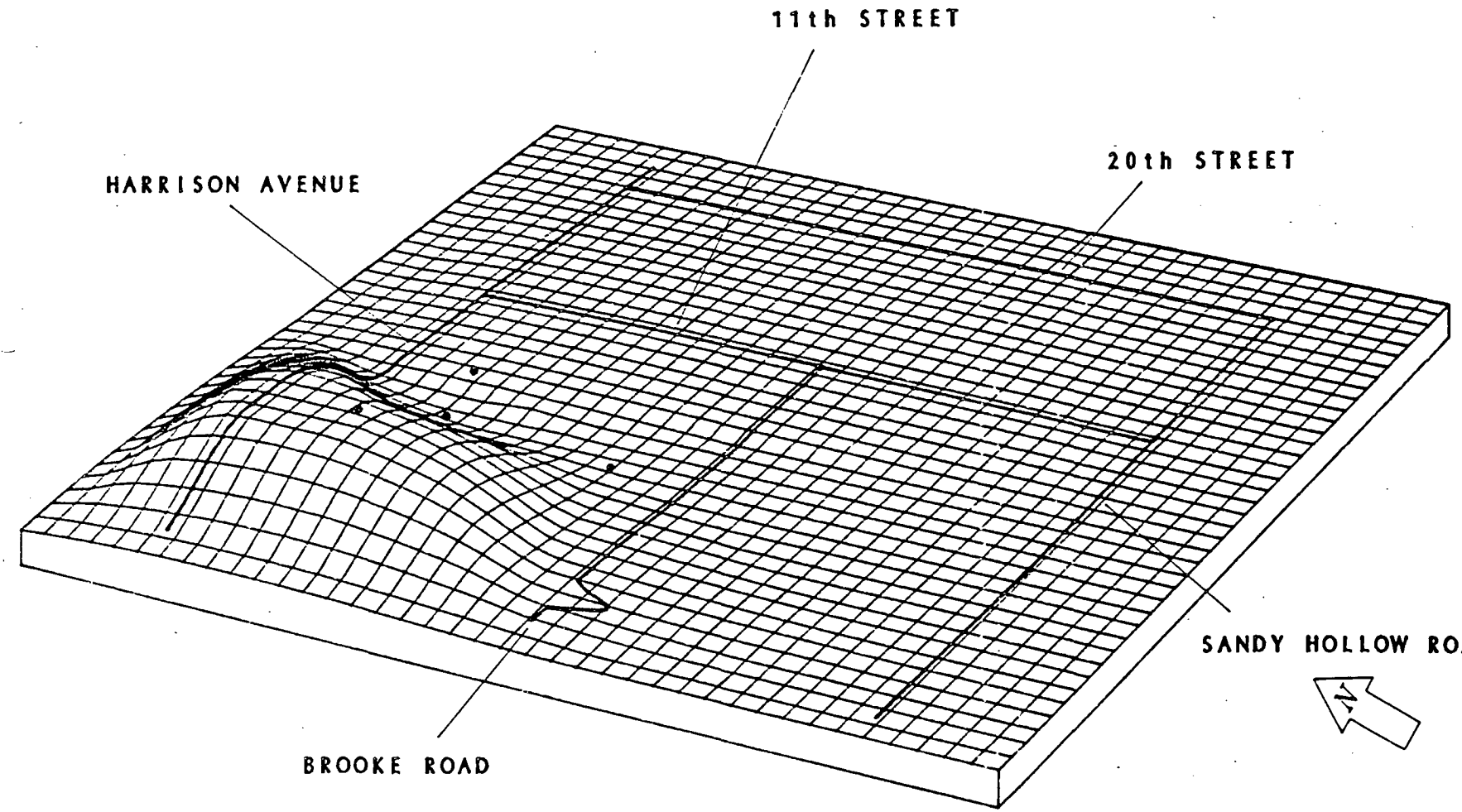
SOUTHEAST ROCKFORD PROJECT
OPERABLE UNIT



CDM
SEP.,1990

3-D CONTOUR PLOT OF VINYL CHLORIDE CONCENTRATIONS FOR IEPA/USEPA DATA

SOUTHEAST ROCKFORD PROJECT OPERABLE UNIT



CDM
SEP.,1990

APPENDIX D

SPREADSHEETS USED TO CALCULATE HAZARD INDICES

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	0.8	5.00	0.16	0.16
	Carcinogens				
	Liver				
	TCE	1.0	5.00	0.20	0.20
	Non-Carcinogens				
	Liver				
	Cis-1,2-DCE	11.00	70.00	0.20	0.20
	Carcinogens				
	Liver				
	PCE	1.1	5.00	0.21	0.21
	Carcinogens				
	Liver				
	TCE	3.3	5.00	0.66	0.66
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	6.3	200.00	0.03	0.03
	Non-Carcinogens				
	Liver				
	Cis 1,2-DCE	14.0	70.00	0.20	0.19

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	1.1	5.00	0.22	
	PCE	0.9	5.00	0.18	0.40
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	1.7	200.00	0.01	0.01
	Carcinogens				
	Liver				
	TCE	1.6	5.00	0.32	0.32
	Carcinogens				
	Liver				
	TCE	1.7	5.00	0.34	
	PCE	1.0	5.00	0.20	0.54
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	1.8	200.00	0.01	0.01

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	2.4	5.00	0.48	
	PCE	2.0	5.00	0.40	0.88
	Non-Carcinogens				
	Liver				
	1,1-DCE	0.6	7.00	0.09	
	1,1,1-TCA	3.8	200.00	0.02	0.10
	Carcinogens				
	Liver				
	TCE	0.6	5.00	0.12	
	PCE	0.5	5.00	0.10	0.22
	Carcinogegns				
	Liver				
	TCE	1.0	5.00	0.20	
	PCE	1.8	5.00	0.36	0.56
	Carcinogens				
	Liver				
	TCE	1.2	5.00	0.24	0.24

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	2.0	5.00	0.40	0.40
	Non-Carcinogens				
	Liver				
	1,1-DCE	1.40	7.00	0.20	
	Cis -1,2-DCE	2.1	70.00	0.03	
	1,1,1-TCA	8.6	200.00	0.04	0.27
	Carcinogens				
	Liver				
	TCE	1.1	5.00	0.22	0.22
	Non-Carcinogens				
	Liver				
	1,1-DCE	1.0	7.00	0.14	
	Cis 1,2-DCE	2.5	70.00	0.04	
	1,1,1-TCA	29.0	200.00	0.15	0.32
	Non-Carcinogens				
	Liver				
	1,1-DCE	0.9	7.00	0.13	
	1,1,1-TCA	11.0	200.00	0.06	0.18

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	0.9	5.00	0.18	0.18
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.5	200.00	0.01	0.01
	Carcinogens				
	Liver				
	TCE	2.0	5.00	0.40	0.40
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.8	200.00	0.01	0.01
	Carcinogens				
	Liver				
	TCE	3.1	5.00	0.62	
	PCE	0.7	5.00	0.14	0.76
	Non-Carcincogens				
	Liver				
	1,1-DCE	1.1	7.00	0.16	
	Cis-1,2-DCE	1.5	70.00	0.02	
	1,1,1-TCA	7.0	200.00	0.04	0.21

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	4.8	5.00	0.96	
	PCE	4.7	5.00	0.94	1.90
	Non-Carcinogens				
	Liver				
	Cis 1,2-DCE	2.0	70.00	0.03	0.03
	Carcinogens				
	Liver				
	TCE	2.9	5.00	0.58	0.58
	Carcinogens				
	Liver				
	TCE	3.20	5.00	0.64	
	PCE	0.60	5.00	0.12	0.76
	Non-Carcinogens				
	Liver				
	1,1-DCE	0.8	7.00	0.11	
	Cis 1,2-DCE	1.1	70.00	0.02	0.13
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	1.9	200.00	0.01	0.01

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	1.8	5.00	0.36	0.36
	Carcinogens				
	Liver				
	PCE	1.2	5.00	0.24	0.24
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.5	200.00	0.01	0.01
	Carcinogens				
	Liver				
	TCE	0.6	5.00	0.12	0.12
	Carcinogens				
	Liver				
	TCE	2.8	5.00	0.56	
	PCE	2.1	5.00	0.42	0.98
	Non-Carcinogens				
	Liver				
	Cis 1,2-DCE	14.0	70.00	0.20	0.20

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	0.9	5.00	0.18	
	PCE	0.7	5.00	0.14	0.32
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.1	200.00	0.01	0.01
	Carcinogens				
	Liver				
	TCE	1.6	5.00	0.32	0.32
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	4.5	200.00	0.02	0.02
	Carcinogens				
	Liver				
	TCE	1.0	5.00	0.20	
	PCE	1.3	5.00	0.26	0.46
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	3.0	200.00	0.02	0.02

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	1.8	5.00	0.36	0.36
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	3.4	200.00	0.02	0.02
	Carcinogens				
	Liver				
	TCE	2.3	5.00	0.46	0.46
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	0.5	200.00	0.00	
	Cis 1,2-DCE	4.7	70.00	0.07	0.07
	Carcinogens				
	Liver				
	TCE	2.1	5.00	0.42	0.42
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	4.1	200.00	0.02	0.02

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	1.7	5.00	0.34	0.34
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	3.1	200.00	0.02	0.02
	Carcinogens				
	Liver				
	TCE	2.0	5.00	0.40	0.40
	PCE	2.40	5.00	0.48	0.88
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	3.2	200.00	0.02	0.02
	Carcinogens				
	Liver				
	TCE	0.8	5.00	0.16	0.16
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	3.4	200.00	0.02	0.02

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	1.6	5.00	0.32	0.32
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.9	200.00	0.01	0.01
	Carcinogens				
	Liver				
	TCE	2.2	5.00	0.44	
	PCE	2.3	5.00	0.46	0.90
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	3.8	200.00	0.02	0.02
	Carcinogens				
	Liver				
	TCE	1.4	5.00	0.28	0.28

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	3.3	5.00	0.66	
	PCE	0.7	5.00	0.14	0.80
	Non-Carcinogens				
	Liver				
	1,1-DCE	1.5	7.00	0.21	
	Cis 1,2-DCE	5.8	70.00	0.08	
	1,1,1-TCA	33.0	200.00	0.17	0.46
	Carcinogens				
	Liver				
	TCE	2.7	5.00	0.54	0.54
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	4.0	200.00	0.02	0.02
	Carcinogens				
	Liver				
	TCE	1.8	5.00	0.36	0.36
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.8	200.00	0.01	0.01

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	2.0	5.00	0.40	0.40
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.9	200.00	0.01	0.01
	Carcinogens				
	Liver				
	TCE	2.6	5.00	0.52	0.52
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	4.2	200.00	0.02	0.02
	Carcinogens				
	Liver				
	TCE	1.9	5.00	0.38	0.38
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.7	200.00	0.01	0.01

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	2.1	5.00	0.42	0.42
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	3.8	200.00	0.02	0.02
[redacted]	Non-Carcinogens				
	Liver				
	1,1,1-TCA	21.0	200.00	0.11	0.11
	Carcinogen				
	Liver				
	TCE	2.5	5.00	0.50	
	PCE	1.0	5.00	0.20	0.70
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	3.9	200.00	0.02	0.02
	Carcinogens				
	Liver				
	TCE	1.8	5.00	0.36	0.36
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	3.3	200.00	0.02	0.02

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	1.9	5.00	0.38	0.38
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	3.0	200.00	0.02	0.02
	Carcinogens				
	Liver				
	TCE	0.9	5.00	0.18	
	PCE	2.4	5.00	0.48	0.66
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.4	200.00	0.01	0.01
	Carcinogens				
	Liver				
	PCE	1.1	5.00	0.22	0.22
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	1.4	200.00	0.01	0.01

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	1.2	5.00	0.24	0.24
	Non-Carcinogens				
	Liver				
	1,1-DCE	0.7	7.00	0.10	0.10
	Carcinogens				
	Liver				
	TCE	0.7	5.00	0.14	
	PCE	2.8	5.00	0.56	0.70
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.0	200.00	0.01	0.01
	Carcinogens				
	Liver				
	TCE	0.7	5.00	0.14	0.14
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.2	200.00	0.01	0.01

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	2.2	5.00	0.44	
	PCE	0.6	5.00	0.12	0.56
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	4.3	200.00	0.02	0.02
	Carcinogens				
	Liver				
	TCE	0.7	5.00	0.14	0.14
	Non-Carcinogens				
	Liver				
	1,1-DCE	1.2	7.00	0.17	
	1,1,1-TCA	39.0	200.00	0.20	0.37
	Carcinogens				
	Stomach				
	1,2-DCA	1.6	100.00	0.02	0.02
	Non-Carcinogens				
	Liver				
	Cis-1,2-DCE	0.1	70.00	0.00	0.00
	Non-Carcinogens				
	Liver				
	TCE	0.5	5.00	0.10	0.10

S. E. ROCKFORD OPERABLE UNIT

NON-CARCINOGENIC AND CARCINOGENIC TARGET ORGAN HAZARD INDICES

Address	Contaminant	Water Concentration ug/l	Maximum Contaminant Levels (ug/l)	Chemical Hazard Index	Target Organ Hazard Index
[redacted]	Carcinogens				
	Liver				
	TCE	1.3	5.00	0.26	0.26
	Non-Carcinogens				
	Liver				
	1,1,1-TCA	2.9	200.00	0.01	0.01